

**Iowa Department of Natural Resources  
Title V Operating Permit**

**Name of Permitted Facility: John Deere Foundry Waterloo**  
**Facility Location: 2000 Westfield Avenue**  
**Waterloo, IA 50704**  
**Air Quality Operating Permit Number: 02-TV-012-M001**  
**Expiration Date: May 23, 2007**

**EIQ Number: 92-1317**  
**Facility File Number: 07-01-010**

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**Responsible Official**

**Barry W. Schaffter**  
**General Manager**  
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**Permit Contact Person for the Facility**

**Matthew Cox**  
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This permit is issued in accordance with 567 Iowa Administrative Code Chapter 22, and is issued subject to the terms and conditions contained in this permit.

**For the Director of the Department of Natural Resources**

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Douglas A. Campbell, Supervisor of Air Operating Permits Section

Date

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## Abbreviations

acfm.....	actual cubic feet per minute
CFR.....	Code of Federal Regulation
EAF.....	electric arc furnace
EIQ.....	emissions inventory questionnaire
°F.....	degrees Fahrenheit
gr/dscf.....	grains per dry standard cubic foot
IAC.....	Iowa Administrative Code
IDNR.....	Iowa Department of Natural Resources
IF.....	induction furnace
lb/hr.....	pounds per hour
lb/MMBtu.....	pounds per million British thermal units
LPG.....	liquefied petroleum gas
MVAC.....	motor vehicle air conditioner
NG.....	natural gas
NSPS.....	new source performance standard
ppmv.....	parts per million by volume
scfm.....	standard cubic feet per minute
TPY.....	tons per year
USEPA.....	United States Environmental Protection Agency

## Pollutants

PM <sub>10</sub> .....	particulate matter ten microns or less in diameter
PM.....	particulate matter
SO <sub>2</sub> .....	sulfur dioxide
NO <sub>x</sub> .....	nitrogen oxides
VOC.....	volatile organic compound
CO.....	carbon monoxide
HAP.....	hazardous air pollutant
DMEA.....	dimethylethylamine

# I. Facility Description and Equipment List

Facility Name: John Deere Foundry Waterloo

Permit Number: 02-TV-012-M001

Facility Description: This facility is a gray iron foundry that manufactures agricultural equipment components.

## Equipment List

### A. Isocure and Pepset Lines

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
082*	P-082	D785 Core Machines
113	P-113	D753 Core Machines; D787 Core Machines
190	P-190	D752 Core Machines
D801FUG	Moldline 801	Moldline 801 Core Cell
D802FUG	Moldline 802	Moldline 802 Core Cell
D737FUG	Jobbing Floor	Jobbing Floor Core Cell

\* The double border around certain equipment indicates that the enclosed equipment is grouped in a table in the Emission Point-Specific Conditions section of the permit.

### B. Core Ovens

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
058	P-058	D783 Despatch Core Oven No. 1
060	P-060	D783 Despatch Core Oven No. 2
069	P-069	D787 OSI Core Oven West
070	P-070	D787 OSI Core Oven East
071	P-071	D785 OSI Core Oven West
072	P-072	D786-D785 OSI Core Oven East
105	P-105	D753 Cell No. 1 Core Oven A
107	P-107	D753 Cell No. 1 Core Oven B

### C. Baghouse-Controlled Sources (Exterior-Vented)

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
248	P-248	ML801 Primary and Secondary Shakeout and Miscellaneous Sand Equipment
249		
AlloyBH	P-120B-IF	Alloy Addition System
CLRBH #1	P-009A	D850 Primary Blast Cabinet
CLRBH #2	P-010	D850 Core Knockout Cabinet
CLRBH #3	P-011A	D850 Spotblast Cabinet
DPBVBH	P-004-IF	IF Dust Pelletizer
ESP	P-174	East Sand Pelletizer-Bin Vent
IFBH	P-3IF	Induction Furnaces (3)
SDSABH	P-162	D775 Sand Delivery Storage Area
IBH1E	P-031	ML802 Casting & Sand Grinding-System I
IBH2		
IBH3W		
IIBH1E	P-034	ML802 Casting & Sand Grinding-System II
IIBH2		
IIBH3		
IIBH4W		
IIIBH1S	P-010A P-017	D853 Core Knockout-System III D853 Primary Blast Cabinet & Grinders
IIIBH2		
IIIBH3N		
IVBH1S	P-018	D853 Spotblast Cabinet-System IV
IVBH2S	P-019	D863 Reblast Cabinet-System IV
	P-023	D851 Tumblast Machines-System IV

#### D. Fugitive and Interior-Vented Sources

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
012	P-012	D802 Tumbblast
148	P-148	D753 New Sand Delivery
133	P-133	ML802 Ductile Iron Conversion
146	P-146	D737 Pouring Floor
161	P-161	D775 New Sand Unload Station
172	P-172	D850 Sand Transfer-Mud Dock
173	P-173	East Sand Pelletizer Loadout
CSHED	P-183	Cooling Shed-ML 801 & 802
D736FUG	P-205	Plantwide Welding
D801FUG	P-123A	ML801 Cooling Area-Pouring/Casting
	P-123B	ML801Casting Cooling Area
	P-126	ML801 Shakeout Casting Cooling
D802FUG	P-132A	ML802 Cooling Area-Pouring
	P-132B	ML802 Cooling Area-Casting
D808FUG	P-242	D808 Sand Reclaim-Fugitive
D830FUG	P-120B	D830 Iron Inoculation
	P-120C	D830 Molten Metal Transfer
	P-120F	D830 Slag Loadout
182D	P-182D	ML 801, 802 Preheat Pouring Ladle: Natural Gas (6) D830 Preheat Tundish Ladle: Natural Gas (2)
185D*	P-185D	ML 801, 802 Preheat Pouring Ladle: Propane (6) D830 Preheat Tundish Ladle: Propane (2)
178	P-178	D740 Solvent Degreaser Tank
180	P-180	D801 Solvent Degreaser Tank

\* Emission point 185D has been assigned to the same equipment as emission point 182D. Emission point 185D is used when this equipment fires propane instead of natural gas.

#### E. Miscellaneous Equipment

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
131	P-128	Pattern Release Agent Application
	P-131	ML801 Mold Spray Booth

## Insignificant Equipment List

Insignificant Emission Unit Number	Insignificant Emission Unit Description
P-117	D737 Pepset Resin I Tank
P-119	D737 Pepset Resin II Tank
P-120G	D830 Clean 15-Ton Ladle
P-147	D737 Green Sand Shakeout Release
P-163	D701 Isocure Resin I Tank No. 1
P-164	D701 Isocure Resin I Tank No. 2
P-166	D701 Isocure Resin II Tank No. 1
P-167	D701 Isocure Resin II Tank No. 2
P-179	D802 Solvent Degreaser Tank
P-182I*	Natural Gas-Fired Heating Equipment
P-185I*	Propane-Fired Heating Equipment
P-200	D710 Plant Maintenance-Fugitive
P-203	D717 Janitorial-Fugitive
P-207	D740 Foundry Maintenance-Fugitive
P-208	D741 Truck Shop-Fugitive
P-232	D866 Heat Treat & Swing Grid-Fugitive
P-237	D902 802 Maintenance-Fugitive
P-246	D863-Chip and Grind-Fugitive
P-247	D730-Maintenance Stockroom
P-D702	D702 Janitorial-Fugitive

\* Emission units P-182I and P-185I consist of the equipment identified in Table HEAT, below. The heaters are natural gas-fired, with propane as a back-up fuel. P-182I represents natural gas combustion, while P-185I is used for propane.



**Table HEAT**

<b>Source Description</b>	<b>Status</b>	<b>Number of Units</b>	<b>MMBtu/hr per Unit</b>
General Building, Overhead Door Heater No. 1	Active	1	1.730
General Building, Overhead Door Heater No. 2	Active	1	1.730
General Building, Overhead Door Heater No. 3	Active	1	0.820
General Building, General Area Space Heater	Active	5	2.000
General Building, Penthouse No. 1 Space Heater	Active	3	1.050
General Building, Penthouse No. 2 Space Heater	Active	2	0.750
General Building, Penthouse No. 3 Space Heater	Active	2	0.450
General Building, Penthouse No. 4 Substation Heater	Active	1	0.175
General Building, Penthouse No. 5 Substation Heater	Active	1	0.250
General Building, Penthouse No. 6 Substation Heater	Active	1	0.175
General Building, Penthouse No. 7 Substation Heater	Active	1	0.250
General Building, Unit Roof Heaters	Active	27	5.400
General Building, Unit Roof Heaters	Active	39	6.480
General Building, Central Heater Boiler Building 8001	Active	1	0.900
General Building, Central Water Heater Building 8001	Active	1	0.900
General Building, Central Water Heater Building 8002	Active	1	1.247
General Building, D775 Sand Shed Space Heater	Active	2	0.700
General Building, D730 Mud Dock Space Heater No. 1	Active	1	0.150
General Building, D730 Mud Dock Space Heater No. 2	Active	1	0.150
ML 801 ETA Baghouse B Space Heaters	Active	3	0.500
ML 801 ETA Baghouse B Space Heater-Pelletizer	Active	1	0.200
Melt Department, IF Baghouse	Active	2	0.500
Melt Department, IF Baghouse	Active	1	0.200
Class 1 Store Room Boiler (water heater)	Active	1	1.900
Manager's Office Boiler (water heater)	Active	1	1.900
Security Building Heater	Active	1	2.000
Locker Room Heater, 8001	Active	1	2.000
East Pelletizer Heater	Active	1	0.750
D830 Space Heater EAF BH#1	Inactive	1	0.075
General Building, Heating System Building 8005	Inactive	1	0.825
General Building, Heating System Building 1030	Inactive	1	1.562

## II. Plant-Wide Conditions

Facility Name: John Deere Foundry Waterloo  
Permit Number: 02-TV-012-M001

Permit conditions are established in accord with 567 Iowa Administrative Code rule 22.108

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### Permit Duration

The term of this permit is: Five (5) years  
Commencing on: May 24, 2002  
Ending on: May 23, 2007

Amendments, modifications and reopenings of the permit shall be obtained in accordance with 567 Iowa Administrative Code rules 22.110 - 22.114. Permits may be suspended, terminated, or revoked as specified in 567 Iowa Administrative Code Rules 22.115.

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### Emission Limits

*Unless specified otherwise in the Emission Point-Specific Conditions, the following limitations and supporting regulations apply to all emission points at this plant:*

Opacity (visible emissions): 40% opacity  
Authority for Requirement: 567 IAC 23.3(2)"d"

Sulfur Dioxide (SO<sub>2</sub>): 500 parts per million by volume  
Authority for Requirement: 567 IAC 23.3(3)"e"

Particulate Matter (state enforceable only)<sup>1</sup>:

No person shall cause or allow the emission of particulate matter from any source in excess of the emission standards specified in this chapter, except as provided in 567 – Chapter 24. For sources constructed, modified or reconstructed after July 21, 1999, the emission of particulate matter from any process shall not exceed an emission standard of 0.1 grain per dry standard cubic foot of exhaust gas, except as provided in 567 – 21.2(455B), 23.1(455B), 23.4(455B) and 567 – Chapter 24.

For sources constructed, modified or reconstructed prior to July 21, 1999, the emission of particulate matter from any process shall not exceed the amount determined from Table I, or amount specified in a permit if based on an emission standard of 0.1 grain per standard cubic foot of exhaust gas or established from standards provided in 23.1(455B) and 23.4(455B).

Authority for Requirement: 567 IAC 23.3(2)"a" (as revised 7/21/1999)

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<sup>1</sup> This is the current language in the Iowa Administrative Code (IAC). This version of the rule is awaiting EPA approval to become part of Iowa's State Implementation Plan (SIP). When EPA approves this rule, it will replace the older version and will be considered federally enforceable.

Particulate Matter (federally enforceable)<sup>2</sup>:

The emission of particulate matter from any process shall not exceed the amount determined from Table I, except as provided in 567 — 21.2(455B), 23.1(455B), 23.4(455B) and 567 — Chapter 24. If the director determines that a process complying with the emission rates specified in Table I is causing or will cause air pollution in a specific area of the state, an emission standard of 0.1 grain per standard cubic foot of exhaust gas may be imposed.

Authority for Requirement: 567 IAC 23.3(2)"a" (prior to 7/21/1999)

Fugitive Dust: Attainment and Unclassified Areas - No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved public roads, without taking reasonable precautions to prevent particulate matter in quantities sufficient to create a nuisance, as defined in Iowa Code section 657.1, from becoming airborne. All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. The highway authority shall be responsible for taking corrective action in those cases where said authority has received complaints of or has actual knowledge of dust conditions which require abatement pursuant to this subrule. Reasonable precautions may include, but not limited to, the following procedures.

1. Use, where practical, of water or chemicals for control of dusts in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
2. Application of suitable materials, such as but not limited to asphalt, oil, water or chemicals on unpaved roads, material stockpiles, race tracks and other surfaces which can give rise to airborne dusts.
3. Installation and use of containment or control equipment, to enclose or otherwise limit the emissions resulting from the handling and transfer of dusty materials, such as but not limited to grain, fertilizers or limestone.
4. Covering at all times when in motion, open-bodied vehicles transporting materials likely to give rise to airborne dusts.
5. Prompt removal of earth or other material from paved streets or to which earth or other material has been transported by trucking or earth-moving equipment, erosion by water or other means.

Authority for Requirement: 567 IAC 23.3(2)"c"

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**Compliance Plan**

*The owner/operator shall comply with the applicable requirements listed below. The compliance status is based on information provided by the applicant.*

Unless otherwise noted in Section III of this permit, John Deere Foundry Waterloo is in compliance with all applicable requirements and shall continue to comply with all such requirements. For those applicable requirements which become effective during the permit term, John Deere Foundry Waterloo shall comply with such requirements in a timely manner.

Authority for Requirement: 567 IAC 22.108(15)

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<sup>2</sup> This is the current language in the Iowa SIP, and is enforceable by EPA.

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## **Title IV**

This facility has been evaluated for Title IV applicability as per 567 IAC 22.122 and has been found to not be subject to any of the Title IV requirements.

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### **Section 112(j) of the Clean Air Act (MACT Hammer)**

On May 14, 2002, John Deere Foundry Waterloo submitted a Part 1 MACT application to IDNR, indicating that the facility may be subject to the Iron Foundry NESHAP, 40 CFR 63 Subpart EEEEE, when it's promulgated. John Deere Foundry Waterloo must submit a Part 2 MACT application by May 14, 2004, if 40 CFR 63 Subpart EEEEE has not been promulgated by that date.

Authority for Requirement: 40 CFR 63.52; 567 IAC 23.1(4)"b"(2)

### III. Emission Point-Specific Conditions

Facility Name: John Deere Foundry Waterloo

Permit Number: 02-TV-012

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**Emission Point ID Number: See Table ISOCURE-A**

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#### **Emission Unit Description**

**Table ISOCURE-A**

<b>Emission Point Number</b>	<b>Associated Emission Unit Number</b>	<b>Emission Unit Description</b>	<b>Control Equipment Number</b>	<b>Control Equipment Description</b>	<b>Raw Material</b>	<b>Rated Capacity (lb/hr)</b>
082	P-082	D785 Core Machines	CE-082	Packed Spray Tower	DMEA Catalyst	3.73
113	P-113	D753 Core Machines D787 Core Machines	CE-113	Packed Spray Tower	DMEA Catalyst	3.73
190	P-190	D752 Core Machines	CE-190	Packed Spray Tower	DMEA Catalyst	3.73
D801FUG	Moldline 801	Moldline 801 Core Cell	none	none	Isocure Resins I & II	53.88
D802FUG	Moldline 802	Moldline 802 Core Cell	none	none	Isocure Resins I & II	53.88

#### **Applicable Requirements**

(The following requirements apply to the emission units identified in Table ISOCURE-A)

#### **Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)**

*The emissions from the emission points identified in Table ISOCURE-A shall not exceed the levels specified below.*

Pollutant: VOC

Emission Limit: 95 TPY<sup>(1)</sup>

Authority for Requirement: Iowa DNR Construction Permits specified in Table ISOCURE-B

<sup>(1)</sup> Limit for all Isocure core making operations. Limit can not be increased without obtaining a PSD permit.

### **Operational Limits & Requirements**

*The owner/operator of the equipment identified in Table ISOCURE-A shall comply with the operational limits and requirements listed below.*

#### **Process throughput:**

1. The amount of Part I and Part II resins used in all Isocure core making operations shall not exceed 1,400,000 pounds per 12 month rolling period.
2. The amount of Core Release Agent used in all Isocure core making operations shall not exceed 16,000 pounds per 12 month rolling period.
3. The amount of N-dimethylethylamine (DMEA) catalyst used in all Isocure core making operations shall not exceed 98,000 pounds per 12 month rolling period.
4. The VOC content of any resin used in all Isocure core making operations shall not exceed 65% by weight.
5. The exhaust from this line shall be connected to a scrubber to control DMEA emissions whenever in operation. [This requirement applies to the core boxes, where the DMEA catalyst is actually used.]

#### **Reporting & Record keeping:**

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. These records shall demonstrate compliance with all applicable operating limits. Records shall be legible and maintained in an orderly manner.

1. Record the amount of Part I and Part II resins used in all Isocure core making operations, in pounds. Calculate and record monthly and 12 month rolling totals.
2. Record the amount of Core Release Agent used in all Isocure core making operations, in pounds. Calculate and record monthly and 12 month rolling totals.
3. Record the amount of DMEA used in all Isocure core making operations, in pounds. Calculate and record monthly and 12 month rolling totals.
4. Record the VOC content of any resin used in all Isocure core making operations, in weight percent.

**Authority for Requirement:** Iowa DNR Construction Permits specified in Table ISOCURE-B

**Emission Point Characteristics**

*The emission points shall conform to the specifications listed below.*

**Table ISOCURE-B**

			Stack Characteristics				
Emission Point Number	Associated Emission Unit Number	Construction Permit #	Height (feet)	Diameter (inches)	Exhaust Flowrate (scfm)	Exhaust Temp. (°F)	Vertical Unobstructed Discharge Required?
082	P-082	95-A-002-S1	Internal Exhaust	NA	NA	Ambient	No
113	P-113	95-A-004-S1	Internal Exhaust	NA	NA	Ambient	No
190	P-190	95-A-003-S1	Internal Exhaust	NA	NA	Ambient	No
D801FUG	Moldline 801		Internal				
D802FUG	Moldline 802		Internal				

It shall be the owner's responsibility to ensure that construction conforms with the emission point characteristics stated above. If it is determined that any of the emission point characteristics are different than stated above, the owner must notify the Department and obtain a construction permit amendment, if required.

Authority for Requirement: Iowa DNR Construction Permits specified in Table ISOCURE-B

**Periodic Monitoring Requirements**

*The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒**

Authority for Requirement: 567 IAC 22.108(3)"b"

## **Emission Point ID Number: D737FUG**

### Associated Equipment

Associated Emission Unit ID Number: Jobbing Floor

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### **Emission Unit Description**

Emission Unit vented through this Emission Point: Jobbing Floor

Emission Unit Description: Jobbing Floor Core Cell

Raw Material/Fuel: Pepset Resins I & II, Pepset Catalyst

Rated Capacity: 24.43 lb/hr

### **Applicable Requirements**

#### **Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: VOC

Emission Limit: 29 TPY<sup>(1)</sup>

Authority for Requirement: Iowa DNR Construction Permit 95-A-005-S1

<sup>(1)</sup> Limit for all Pepset core making operations. Limit can not be increased without obtaining a PSD permit.

#### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

Process throughput:

1. The amount of Part I and Part II resins used in all Pepset core making operations shall not exceed 200,000 pounds per 12 month rolling period.
2. The amount of Core Release Agent used in all Pepset core making operations shall not exceed 8,000 pounds per 12 month rolling period.
3. The amount of Pepset catalyst used in all Pepset core making operations shall not exceed 6,000 pounds per 12 month rolling period.
4. The VOC content of any resin used in all Pepset core making operations shall not exceed 65% by weight.



**Reporting & Record keeping:**

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. These records shall demonstrate compliance with all applicable operating limits. Records shall be legible and maintained in an orderly manner.

1. Record the amount of Part I and Part II resins used in all Pepset core making operations, in pounds. Calculate and record monthly and 12 month rolling totals.
2. Record the amount of Core Release Agent used in all Pepset core making operations, in pounds. Calculate and record monthly and 12 month rolling totals.
3. Record the amount of Pepset catalyst used in all Pepset core making operations, in pounds. Calculate and record monthly and 12 month rolling totals.
4. Record the VOC content of any resin used in all Pepset core making operations, in weight percent.

Authority for Requirement: Iowa DNR Construction Permit 95-A-005-S1

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height (feet): Fugitive

Stack Diameter (inches): NA

Stack Exhaust Flow Rate (scfm): NA

Stack Temperature (°F): Ambient

Vertical, Unobstructed Discharge Required: Yes ☐ No ☒

Authority for Requirement: Iowa DNR Construction Permit 95-A-005-S1

It shall be the owner's responsibility to ensure that construction conforms with the emission point characteristics stated above. If it is determined that any of the emission point characteristics are different than stated above, the owner must notify the Department and obtain a construction permit amendment, if required.

**Periodic Monitoring Requirements**

*The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒**

Authority for Requirement: 567 IAC 22.108(3)"b"

## Emission Point ID Number: See Table OVEN

### Emission Unit Description

Table OVEN

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Raw Material	Rated Capacity (ton/hr, MMBtu/hr)
058	P-058	D783 Despatch Core Oven No. 1	Sand, NG/LPG	9.22, 2.5
060	P-060	D783 Despatch Core Oven No. 2	Sand, NG/LPG	9.22, 2.5
069	P-069	D787 OSI Core Oven West	Sand, NG/LPG	11.06, 2.0
070	P-070	D787 OSI Core Oven East	Sand, NG/LPG	11.06, 2.0
071	P-071	D785 OSI Core Oven West	Sand, NG/LPG	11.06, 2.0
072	P-072	D786-D785 OSI Core Oven East	Sand, NG/LPG	11.06, 2.0
105	P-105	D753 Cell No. 1 Core Oven A	Sand, NG/LPG	9.22, 2.5
107	P-107	D753 Cell No. 1 Core Oven B	Sand, NG/LPG	9.22, 2.5

### Applicable Requirements

(The following requirements apply to the emission units identified in Table OVEN)

### Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

*The emissions from these emission points shall not exceed the following specified levels.*

Table OVEN2

Emission Point Number	Associated Emission Unit Number	Opacity Limit	PM <sub>10</sub> Limit (lb/hr)	PM Limit (gr/scf)	SO <sub>2</sub> Limit (ppmv)	Construction Permit #
058	P-058	40% <sup>(1)</sup>	0.396	0.1	500	01-A-942
060	P-060	40% <sup>(1)</sup>	0.396	0.1	500	01-A-943
069	P-069	40% <sup>(1)</sup>	0.229	0.1	500	01-A-946
070	P-070	40% <sup>(1)</sup>	0.229	0.1	500	01-A-947
071	P-071	40% <sup>(1)</sup>	0.229	0.1	500	01-A-948
072	P-072	40% <sup>(1)</sup>	0.229	0.1	500	01-A-949
105	P-105	40% <sup>(1)</sup>	0.396	0.1	500	01-A-944
107	P-107	40% <sup>(1)</sup>	0.396	0.1	500	01-A-945

Pollutant: Opacity

Emission Limit: 40% <sup>(1)</sup>

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permits specified in Table OVEN2

- <sup>(1)</sup> Per DNR Air Quality Policy 3-b-08, Opacity Limits, an exceedence of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedence. The permit holder shall also file an "indicator opacity exceedence report" with the DNR field office and keep records as required in the policy. If exceedences continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: PM<sub>10</sub>

Emission Limit: As specified in Table OVEN2

Authority for Requirement: Iowa DNR Construction Permits specified in Table OVEN2

Pollutant: Particulate Matter

Emission Limit: 0.1 gr/scf

Authority for Requirement: 567 IAC 23.3(2)"a"

Iowa DNR Construction Permits specified in Table OVEN2

Pollutant: Sulfur Dioxide (SO<sub>2</sub>)

Emission Limit: 500 ppmv

Authority for Requirement: 567 IAC 23.3(3)"e"

Iowa DNR Construction Permits specified in Table OVEN2

### **Emission Point Characteristics**

These emission points shall conform to the conditions specified in Table OVEN3.

**Table OVEN3**

			Stack Characteristics				
Emission Point Number	Emission Unit Number	Construction Permit #	Height	Diameter (inches)	Exhaust Flowrate (scfm)	Exhaust Temp. (°F)	Vertical Unobstructed Discharge Required?
058	P-058	01-A-942	44.1	15	2,000	230	Yes
060	P-060	01-A-943	44.1	15	2,000	230	Yes
069	P-069	01-A-946	47.8	15	1,500	230	Yes
070	P-070	01-A-947	44.0	15	1,500	220	Yes
071	P-071	01-A-948	44.0	15	1,500	230	Yes
072	P-072	01-A-949	44.0	15	1,500	220	Yes
105	P-105	01-A-944	44.7	12	3,500	220	Yes
107	P-107	01-A-945	44.7	12	3,500	220	Yes

Authority for Requirement: Iowa DNR Construction Permits specified in Table OVEN3

It shall be the owner's responsibility to ensure that construction conforms with the emission point characteristics stated above. If it is determined that any of the emission point characteristics are different than stated above, the owner must notify the Department and obtain a construction permit amendment, if required.

**Periodic Monitoring Requirements**

*The owner/operator of this equipment shall comply with the following periodic monitoring requirements.*

**Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒**

Authority for Requirement: 567 IAC 22.108(3)"b"

## **Emission Point ID Number: 248**

### **Associated Equipment**

Associated Emission Unit ID Number: P-248

Emissions Control Equipment ID Number: ML801BHA

Emissions Control Equipment Description: Baghouse

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### **Emission Unit Description**

Emission Unit vented through this Emission Point: P-248

Emission Unit Description: ML801 Primary and Secondary Shakeout and Miscellaneous Sand Equipment

Raw Material/Fuel: Metal/Sand

Rated Capacity: 41.10 tons per hour

### **Applicable Requirements**

#### **Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limit: 40% <sup>(1)</sup>

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permit 97-A-139-S1

<sup>(1)</sup> If visible emissions are observed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: PM<sub>10</sub>

Emission Limit: 3.67 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 97-A-139-S1

Pollutant: Particulate Matter

Emission Limit: 0.1 gr/scf

Authority for Requirement: 567 IAC 23.3(2)"a"

Iowa DNR Construction Permit 97-A-139-S1

#### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

Control equipment parameters:

- The baghouse and filter bags must be operated and maintained according to manufacturer's instructions and specifications.

**Reporting & Record keeping:**

Records shall be maintained on site for five (5) years and be available for inspection upon request by representatives of the Department of Natural Resources. These records shall show the following:

- Maintenance of baghouse and replacement filters.

Authority for Requirement: Iowa DNR Construction Permit 97-A-139-S1

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height (feet): 58

Stack Diameter (feet): 4.33

Stack Exhaust Flow Rate (scfm): 60,600

Stack Temperature (°F): 120

Vertical, Unobstructed Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 97-A-139-S1

It shall be the owner's responsibility to ensure that construction conforms with the emission point characteristics stated above. If it is determined that any of the emission point characteristics are different than stated above, the owner must notify the Department and obtain a construction permit amendment, if required.

**Periodic Monitoring Requirements**

*The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.*

**Stack Testing:**

Pollutant - PM<sub>10</sub>

Stack Test to be Completed by - May 24, 2004

Test Method - 40 CFR 51, Appendix M, 201A with 202\*

Authority for Requirement - 567 IAC 22.108(3)

Pollutant - Particulate Matter

Stack Test to be Completed by - May 24, 2004

Test Method - Iowa Compliance Sampling Manual Method 5\*

Authority for Requirement - 567 IAC 22.108(3)

\* or approved alternative

*The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)*

**Agency Approved Operation & Maintenance Plan Required? Yes ☒ No ☐**

JDFW shall maintain this baghouse according to John Deere Foundry Waterloo (JDFW) Air Pollution Control Device Preventive Maintenance Plan, attached to this permit as Appendix B.

**Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒**

Authority for Requirement: 567 IAC 22.108(3)"b"

## **Emission Point ID Number: 249**

### **Associated Equipment**

Associated Emission Unit ID Number: P-248

Emissions Control Equipment ID Number: ML801BHB

Emissions Control Equipment Description: Baghouse

---

### **Emission Unit Description**

Emission Unit vented through this Emission Point: P-248

Emission Unit Description: ML801 Primary and Secondary Shakeout and Miscellaneous Sand Equipment

Raw Material/Fuel: Metal/Sand

Rated Capacity: 41.10 tons per hour

### **Applicable Requirements**

#### **Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limit: 40% <sup>(1)</sup>

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permit 97-A-138-S2

<sup>(1)</sup> If visible emissions are observed other than at startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: PM<sub>10</sub>

Emission Limit: 25.0 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 97-A-138-S2

Pollutant: Particulate Matter

Emission Limit: 0.1 gr/scf

Authority for Requirement: 567 IAC 23.3(2)"a"

Iowa DNR Construction Permit 97-A-138-S2



### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

Control equipment parameters:

1. Table 249

Emission Point Number	Emission Unit Number	Dust Pickup Areas
249	P-248	<div>The following units shall be associated with Mold Line 801 and vented to emission point 249:</div> <div><div><div>▪ Primary Shakeout</div><div>▪ Secondary Shakeout</div><div>▪ New Dust Silo Mixer #1</div><div>▪ Cycle Discharge</div><div>▪ Sand Belt</div><div>▪ Elevator</div><div>▪ Drag Spill Conv Dsch</div><div>▪ Cope Punchout</div><div>▪ Belt 603</div><div>▪ Belt 604</div><div>▪ Belt 103F</div></div><div><div>▪ Belt 611</div><div>▪ Sand Bin</div><div>▪ Sand Muller</div><div>▪ Drag Machine</div><div>▪ Belt 606</div><div>▪ SK Cope Machine</div><div>▪ Lumpbreaker</div><div>▪ Sand Cooler</div><div>▪ Belt 106</div><div>▪ Attrition Mill</div><div>▪ Additional Feed System</div></div></div>

Authority for Requirement: Iowa DNR Construction Permit 97-A-138-S2

### **Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height (feet): 110

Stack Diameter (inches): 132

Stack Exhaust Flow Rate (scfm): 375,000

Stack Temperature (°F): 110

Vertical, Unobstructed Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 97-A-138-S2

It shall be the owner's responsibility to ensure that construction conforms with the emission point characteristics stated above. If it is determined that any of the emission point characteristics are different than stated above, the owner must notify the Department and obtain a construction permit amendment, if required.

### **Periodic Monitoring Requirements**

*The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.*

#### **Stack Testing:**

Pollutant - PM<sub>10</sub>

Stack Test to be Completed by - May 24, 2004

Test Method - 40 CFR 51, Appendix M, 201A with 202\*

Authority for Requirement - 567 IAC 22.108(3)

Pollutant - Particulate Matter

Stack Test to be Completed by - May 24, 2004

Test Method - Iowa Compliance Sampling Manual Method 5\*

Authority for Requirement - 567 IAC 22.108(3)

\* or approved alternative

*The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)*

**Agency Approved Operation & Maintenance Plan Required? Yes ☒ No ☐**

JDFW shall maintain this baghouse according to John Deere Foundry Waterloo (JDFW) Air Pollution Control Device Preventive Maintenance Plan, attached to this permit as Appendix B.

**Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒**

Authority for Requirement: 567 IAC 22.108(3)"b"

## **Emission Point ID Number: AlloyBH**

### Associated Equipment

Associated Emission Unit ID Number: P-120B-IF  
Emissions Control Equipment ID Number: AlloyBH  
Emissions Control Equipment Description: Baghouse

---

### Emission Unit Description

Emission Unit vented through this Emission Point: P-120B-IF  
Emission Unit Description: Alloy Addition System  
Raw Material/Fuel: Alloy  
Rated Capacity: 0.12 tons per hour

### Applicable Requirements

#### Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limit: 40% <sup>(1)</sup>

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permit 99-A-349

<sup>(1)</sup> If visible emissions are observed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: PM<sub>10</sub>

Emission Limit: 0.64 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 99-A-349

Pollutant: Particulate Matter

Emission Limit: 0.1 gr/scf, 0.64 lb/hr

Authority for Requirement: 567 IAC 23.3(2)"a"

Iowa DNR Construction Permit 99-A-349

#### Emission Point Characteristics

*The emission point shall conform to the specifications listed below.*

Stack Height (feet from ground): 66

Stack Diameter (inches): 22

Stack Exhaust Flow Rate (acfm): 10,000

Stack Temperature (°F): 90

Vertical, Unobstructed Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 99-A-349

It shall be the owner's responsibility to ensure that construction conforms with the emission point characteristics stated above. If it is determined that any of the emission point characteristics are different than stated above, the owner must notify the Department and obtain a construction permit amendment, if required.

**Periodic Monitoring Requirements**

*The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Facility Maintained Operation & Maintenance Plan Required? Yes ☒ No ☐**

*Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.*

*Facility operation and maintenance plans are to be developed by the facility within six(6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.*

*Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.*

Authority for Requirement: 567 IAC 22.108(3)"b"

## **Emission Point ID Number: CLRBH#1**

### Associated Equipment

Associated Emission Unit ID Number: P-009a  
Emissions Control Equipment ID Number: CLRBH#1  
Emissions Control Equipment Description: Baghouse

---

### Emission Unit Description

Emission Unit vented through this Emission Point: P-009a  
Emission Unit Description: D850 Primary Blast Cabinet  
Raw Material/Fuel: Metal  
Rated Capacity: 27 tons per hour

### Applicable Requirements

#### Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity  
Emission Limit: 20%  
Authority for Requirement: 567 IAC 23.3(2)"d"  
Iowa DNR Construction Permit 94-A-582

Pollutant: PM<sub>10</sub>  
Emission Limit: 0.0041 gr/scf, 1.38 lb/hr, 6.04 TPY  
Authority for Requirement: Iowa DNR Construction Permit 94-A-582

Pollutant: Particulate Matter  
Emission Limit: 0.05 gr/scf  
Authority for Requirement: 567 IAC 23.4(6)

### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

Control equipment parameters:

1. The emissions control system must be in operation at all times that the production equipment is in operation.
2. The following pickup points shall be controlled by this fabric filter:
  - D850 blast points A through U
  - D850 blast points AA, AB, AC, and AD

Reporting & Record keeping:

Records shall be maintained on site for five (5) years and be available for inspection upon request by representatives of the Department of Natural Resources. These records shall show the following:

1. The record must include, at a minimum, the days and hours of observations, and the date of inspections and adjustments.
2. The record shall also show that the control system has been operated and maintained according to the manufacturer's specifications.

Authority for Requirement: Iowa DNR Construction Permit 94-A-582

### **Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height (feet): 86.8

Stack Diameter (feet): 5

Stack Exhaust Flow Rate (acfm): 40,000

Stack Temperature (°F): 100

Vertical, Unobstructed Discharge Required: Yes ☐ No ☒

Authority for Requirement: Iowa DNR Construction Permit 94-A-582

It shall be the owner's responsibility to ensure that construction conforms with the emission point characteristics stated above. If it is determined that any of the emission point characteristics are different than stated above, the owner must notify the Department and obtain a construction permit amendment, if required.

**Periodic Monitoring Requirements**

*The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.*

**Opacity Monitoring:**

The facility shall check the opacity weekly during a period when the emission unit on this emission point is at or near full capacity and record the reading. Maintain a written record of the observation and any action resulting from the observation for a minimum of five years. Opacity shall be observed to ensure that no visible emissions occur during the material handling operation of the unit. If visible emissions are observed corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If corrective action does not return the observation to no visible emissions, then a Method 9 observation will be required. If an opacity greater than 20% is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet. At least three attempts shall be made to retake opacity readings at approximately 2-hour intervals throughout the day. If all observation attempts for a week have been unsuccessful due to weather, an observation shall be made the next operating day where weather permits.

Authority for Requirement: 567 IAC 22.108(14)

**Stack Testing:**

For purposes of this permit, the stack testing required for emission point CLRBH#3 will represent the compliance testing for this emission point.

**Agency Approved Operation & Maintenance Plan Required? Yes ☒ No ☐**

JDFW shall maintain this baghouse according to John Deere Foundry Waterloo (JDFW) Air Pollution Control Device Preventive Maintenance Plan, attached to this permit as Appendix B.

**Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒**

Authority for Requirement: 567 IAC 22.108(3)"b"

## **Emission Point ID Number: CLRBH#2**

### **Associated Equipment**

Associated Emission Unit ID Number: P-010

Emissions Control Equipment ID Number: CLRBH#2

Emissions Control Equipment Description: Baghouse

---

### **Emission Unit Description**

Emission Unit vented through this Emission Point: P-010

Emission Unit Description: D850 Core Knockout Cabinet

Raw Material/Fuel: Metal

Rated Capacity: 10 tons per hour

### **Applicable Requirements**

#### **Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limit: 40% <sup>(1)</sup>

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permit 94-A-583-S2

<sup>(1)</sup> If visible emissions are observed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: PM<sub>10</sub>

Emission Limit: 0.88 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 94-A-583-S2

Pollutant: Particulate Matter

Emission Limit: 0.05 gr/scf

Authority for Requirement: 567 IAC 23.4(6)

Iowa DNR Construction Permit 94-A-583-S2

#### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

Control equipment parameters:

1. The baghouse and filter bags must be operated and maintained according to manufacturer's instructions and specifications.



2. The following pickup points shall be controlled by this fabric filter:
- D850 Reblast Points A, B, C, D, E, F, G, H,I, and J
  - Sand Dropout Hopper
  - Sand Return Hood 1
  - Sand Return Belt 1
  - D850 Core Knockout Points A, B, and C

**Reporting & Record keeping:**

Records shall be maintained on site for five (5) years and be available for inspection upon request by representatives of the Department of Natural Resources. These records shall show the following:

- Maintenance of baghouse and replacement filters.

Authority for Requirement: Iowa DNR Construction Permit 94-A-583-S2

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height (feet): 86.8

Stack Diameter (feet): 5

Stack Exhaust Flow Rate (scfm): 50,000

Stack Temperature (°F): 100

Vertical, Unobstructed Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 94-A-583-S2

It shall be the owner's responsibility to ensure that construction conforms with the emission point characteristics stated above. If it is determined that any of the emission point characteristics are different than stated above, the owner must notify the Department and obtain a construction permit amendment, if required.

**Periodic Monitoring Requirements**

*The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.*

**Stack Testing:**

For purposes of this permit, the stack testing required for emission point CLRBH#3 will represent the compliance testing for this emission point.

**Agency Approved Operation & Maintenance Plan Required? Yes ☒ No ☐**

JDFW shall maintain this baghouse according to John Deere Foundry Waterloo (JDFW) Air Pollution Control Device Preventive Maintenance Plan, attached to this permit as Appendix B.

**Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒**

Authority for Requirement: 567 IAC 22.108(3)"b"

## **Emission Point ID Number: CLRBH#3**

### Associated Equipment

Associated Emission Unit ID Number: P-011a  
Emissions Control Equipment ID Number: CLRBH#3  
Emissions Control Equipment Description: Baghouse

---

### Emission Unit Description

Emission Unit vented through this Emission Point: P-011a  
Emission Unit Description: D850 Spotblast Cabinet  
Raw Material/Fuel: Metal  
Rated Capacity: 19.5 tons per hour

### Applicable Requirements

#### Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limit: 40% <sup>(1)</sup>

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permit 94-A-584-S2

<sup>(1)</sup> If visible emissions are observed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: PM<sub>10</sub>

Emission Limit: 1.78 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 94-A-584-S2

Pollutant: Particulate Matter

Emission Limit: 0.05 gr/scf

Authority for Requirement: 567 IAC 23.4(6)

Iowa DNR Construction Permit 94-A-584-S2

### Operational Limits & Requirements

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

Control equipment parameters:

1. The baghouse and filter bags must be operated and maintained according to manufacturer's instructions and specifications.

2. The following pickup points shall be controlled by this fabric filter:

- D850 Spotblast Cabinet Points A, B, C, D, and E
- D850 Core KO Blowoff Cabinet PU 1 and 2
- Conveyor Belt Hopper 406-A PU 1 and 2
- Conveyor Belt 107 PU 1
- Conveyor Belt 408 PU 1
- Conveyor Belt 409 PU 1 and 2
- Conveyor Belt 410 PU 1 and 2
- Crossover Pan 401-A PU 1, 2, 3, and 4
- Hopper
- Shot Pan PU 1, 2, and 3
- Tramp Iron Reclaimer PU 1 and 2
- Tramp Iron Sand Elevator
- Belt 103-B PU 1
- Belt 103-C PU 1, 2, and 3
- Belt 103-D PU 1 and 3
- Belt 411-A PU 3, 4, and 5
- Belt 412-A PU 2 and 3

Reporting & Record keeping:

Records shall be maintained on site for five (5) years and be available for inspection upon request by representatives of the Department of Natural Resources. These records shall show the following:

- Maintenance of baghouse and replacement filters.

Authority for Requirement: Iowa DNR Construction Permit 94-A-584-S2

### **Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height (feet): 86.8

Stack Diameter (feet): 5

Stack Exhaust Flow Rate (scfm): 50,000

Stack Temperature (°F): 100

Vertical, Unobstructed Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 94-A-584-S2

It shall be the owner's responsibility to ensure that construction conforms with the emission point characteristics stated above. If it is determined that any of the emission point characteristics are different than stated above, the owner must notify the Department and obtain a construction permit amendment, if required.

### **Periodic Monitoring Requirements**

*The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.*

#### **Stack Testing:**

Pollutant - PM<sub>10</sub>

Stack Test to be Completed by - May 24, 2004

Test Method - 40 CFR 51, Appendix M, 201A with 202\*

Authority for Requirement - 567 IAC 22.108(3)

Pollutant - Particulate Matter

Stack Test to be Completed by - May 24, 2004

Test Method - Iowa Compliance Sampling Manual Method 5\*

Authority for Requirement - 567 IAC 22.108(3)

\* or approved alternative

*The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)*

For purposes of this permit, the stack testing required for this emission point will also represent the compliance testing for emission points CLRBH#1 and CLRBH#2.

**Agency Approved Operation & Maintenance Plan Required? Yes ☒ No ☐**

JDFW shall maintain this baghouse according to John Deere Foundry Waterloo (JDFW) Air Pollution Control Device Preventive Maintenance Plan, attached to this permit as Appendix B.

**Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒**

Authority for Requirement: 567 IAC 22.108(3)"b"

## **Emission Point ID Number: DPBVBH**

### Associated Equipment

Associated Emission Unit ID Number: P-004-IF

Emissions Control Equipment ID Number: IFDPBH

Emissions Control Equipment Description: Baghouse

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### Emission Unit Description

Emission Unit vented through this Emission Point: P-004-IF

Emission Unit Description: IF Dust Pelletizer

Raw Material/Fuel: IF Dust

Rated Capacity: 0.07 tons per hour

### Applicable Requirements

#### Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limit: 40% <sup>(1)</sup>

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permit 98-A-958-S1

- <sup>(1)</sup> Per DNR Air Quality Policy 3-b-08, Opacity Limits, an exceedence of the indicator opacity of no visible emissions will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedence. The permit holder shall also file an "indicator opacity exceedence report" with the DNR field office and keep records as required in the policy. If exceedences continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: PM<sub>10</sub>

Emission Limit: 0.18 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 98-A-958-S1

Pollutant: Particulate Matter

Emission Limit: 0.1 gr/dscf

Authority for Requirement: 567 IAC 23.3(2)"a"

Iowa DNR Construction Permit 98-A-958-S1

### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

Hours of operation:

- This silo is limited to operating a maximum of eight (8) hours per day.

Reporting & Record keeping:

Records shall be maintained on site for five (5) years and be available for inspection upon request by representatives of the Department of Natural Resources. These records shall show the following:

- Record the number of hours per day this silo is operated.

Authority for Requirement: Iowa DNR Construction Permit 98-A-958-S1

### **Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height (feet from ground): 86

Stack Diameter (inches): 16

Stack Exhaust Flow Rate (scfm): 3,655

Stack Temperature (°F): 120

Vertical, Unobstructed Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 98-A-958-S1

It shall be the owner's responsibility to ensure that construction conforms with the emission point characteristics stated above. If it is determined that any of the emission point characteristics are different than stated above, the owner must notify the Department and obtain a construction permit amendment, if required.

### **Periodic Monitoring Requirements**

*The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.*

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

## **Emission Point ID Number: ESP**

### Associated Equipment

Associated Emission Unit ID Number: P-174

Emissions Control Equipment ID Number: ESP

Emissions Control Equipment Description: Baghouse

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### **Emission Unit Description**

Emission Unit vented through this Emission Point: P-174

Emission Unit Description: East Sand Pelletizer-Bin Vent

Raw Material/Fuel: Sand

Rated Capacity: 5.22 tons per hour

### **Applicable Requirements**

#### **Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limit: 40%

Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter

Emission Limit: 0.05 gr/scf

Authority for Requirement: 567 IAC 23.4(6)

#### **Periodic Monitoring Requirements**

*The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required?** Yes ☐ No ☒

**Facility Maintained Operation & Maintenance Plan Required?** Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"



## **Emission Point ID Number: IFBH**

### Associated Equipment

Associated Emission Unit ID Number: P-3IF

Emissions Control Equipment ID Number: IFBH

Emissions Control Equipment Description: Baghouse

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### Emission Unit Description

Emission Unit vented through this Emission Point: P-3IF

Emission Unit Description: Induction Furnaces (3)

Raw Material/Fuel: Metal

Rated Capacity: 66 tons per hour

### Applicable Requirements

#### Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limit: 40% <sup>(1)</sup>

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permit 98-A-957

<sup>(1)</sup> If visible emissions are observed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: PM<sub>10</sub>

Emission Limit: 11.9 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 98-A-957

Pollutant: Particulate Matter

Emission Limit: 0.1 gr/scf

Authority for Requirement: 567 IAC 23.4(5)

Iowa DNR Construction Permit 98-A-957

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit: 13.9 lb/hr, 61 TPY

Authority for Requirement: Iowa DNR Construction Permit 98-A-957

Pollutant: Lead (Pb)

Emission Limit: 0.13 lb/hr, 0.57 TPY

Authority for Requirement: Iowa DNR Construction Permit 98-A-957

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height (feet): 80

Stack Diameter (inches): 100

Stack Exhaust Flow Rate (acfm): 200,000

Stack Temperature (°F): 150

Vertical, Unobstructed Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 98-A-957

It shall be the owner's responsibility to ensure that construction conforms with the emission point characteristics stated above. If it is determined that any of the emission point characteristics are different than stated above, the owner must notify the Department and obtain a construction permit amendment, if required.

**Periodic Monitoring Requirements**

*The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes ☒ No ☐**

JDFW shall maintain this baghouse according to John Deere Foundry Waterloo (JDFW) Air Pollution Control Device Preventive Maintenance Plan, attached to this permit as Appendix B.

**Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒**

Authority for Requirement: 567 IAC 22.108(3)"b"

## **Emission Point ID Number: SDSABH**

### **Associated Equipment**

Associated Emission Unit ID Number: P-162

Emissions Control Equipment ID Number: 162

Emissions Control Equipment Description: Baghouse

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### **Emission Unit Description**

Emission Unit vented through this Emission Point: P-162

Emission Unit Description: D775 Sand Delivery Storage Area

Raw Material/Fuel: Sand

Rated Capacity: 27.79 tons per hour

### **Applicable Requirements**

#### **Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limit: 40% <sup>(1)</sup>

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permit 72-040-S3

<sup>(1)</sup> If visible emissions are observed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: PM<sub>10</sub>

Emission Limit: 0.65 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 72-040-S3

Pollutant: Particulate Matter

Emission Limit: 0.1 gr/scf

Authority for Requirement: 567 IAC 23.3(2)"a"

Iowa DNR Construction Permit 72-040-S3

#### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

Control equipment parameters:

- The emissions control system must be in operation at all times that the production equipment is in operation.

Authority for Requirement: Iowa DNR Construction Permit 72-040-S3

### **Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height (feet from ground): 57

Stack Diameter (inches): 24

Stack Exhaust Flow Rate (acfm): 12,600

Stack Temperature (°F): Ambient

Vertical, Unobstructed Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 72-040-S3

It shall be the owner's responsibility to ensure that construction conforms with the emission point characteristics stated above. If it is determined that any of the emission point characteristics are different than stated above, the owner must notify the Department and obtain a construction permit amendment, if required.

### **Periodic Monitoring Requirements**

*The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Facility Maintained Operation & Maintenance Plan Required? Yes ☒ No ☐**

*Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.*

*Facility operation and maintenance plans are to be developed by the facility within six(6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.*

*Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.*

Authority for Requirement: 567 IAC 22.108(3)"b"

**Emission Point ID Number: See Table BH1****Emission Unit Description**

Table BH1

<b>Emission Point Number</b>	<b>Control Equipment Number</b>	<b>Control Equipment Description</b>	<b>Emission Unit Number</b>	<b>Emission Unit Description</b>	<b>Raw Material</b>	<b>Rated Capacity (ton/hr)</b>
IBH1E	IBH1E	Baghouse	P-031	ML802 Casting & Sand Grinding	Metal	38.60
IBH2	IBH2	Baghouse				
IBH3W	IBH3W	Baghouse				
IIBH1E	IIBH1E	Baghouse	P-034	ML802 Casting & Sand Grinding	Metal	38.60
IIBH2	IIBH2	Baghouse				
IIBH3	IIBH3	Baghouse				
IIBH4W	IIBH4W	Baghouse				
IIIBH1S	IIIBH1S	Baghouse	P-010A	D853 Core Knockout	Metal	20.00
IIIBH2	IIIBH2	Baghouse	P-017	D853 Primary Blast Cabinet & Grinders	Metal	23.86
IIIBH3N	IIIBH3N	Baghouse				
IVBH1S	IVBH1S	Baghouse	P-018	D853 Spotblast Cabinet	Metal	12.00
			P-019	D863 Reblast Cabinet	Metal	12.00
IVBH2S	IVBH2S	Baghouse	P-023	D851 Tumbblast Machines	Metal	12.00

## Applicable Requirements

### Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

*The emissions from each emission point identified in Table BH2 shall not exceed the following specified levels.*

Table BH2

<b>Emission Point Number</b>	<b>Associated Emission Unit Number</b>	<b>Opacity Limit</b>	<b>PM<sub>10</sub> Limit (lb/hr)</b>	<b>PM Limit (gr/scf)</b>	<b>Construction Permit #</b>
IBH1E	P-031	20%	2.82	0.1	77-A-117-S5
IBH2		20%	2.82	0.1	77-A-118-S5
IBH3W		20%	2.82	0.1	77-A-119-S5
IIBH1E	P-034	20%	2.93	0.1	77-A-120-S6
IIBH2		20%	2.93	0.1	77-A-121-S5
IIBH3		20%	2.93	0.1	77-A-122-S5
IIBH4W		20%	2.93	0.1	77-A-123-S5
IIIBH1S	P-010A P-017	20%	1.72	0.1	77-A-209-S5
IIIBH2		20%	1.72	0.1	77-A-210-S5
IIIBH3N		20%	1.72	0.1	77-A-211-S5
IVBH1S	P-018	20%	1.74	0.1	77-A-207-S4
IVBH2S	P-019 P-023	20%	1.74	0.1	77-A-208-S4

Pollutant: Opacity

Emission Limit: 20%

Authority for Requirement: 567 IAC 23.3(2)"d"

Iowa DNR Construction Permits specified in Table BH2

Pollutant: PM<sub>10</sub>

Emission Limit: As specified in Table BH2

Authority for Requirement: Iowa DNR Construction Permits specified in Table BH2

Pollutant: Particulate Matter

Emission Limit: 0.1 gr/scf

Authority for Requirement: 567 IAC 23.3(2)"a"

Iowa DNR Construction Permits specified in Table BH2

## **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

Control equipment parameters:

1. The emission control system[s] must be in operation at all times that the production equipment is in operation.
2. The emission control equipment must be maintained and operated according to manufacturer's instructions and specifications.
3. Table BH3

<b>Emission Point Number</b>	<b>Emission Unit Number</b>	<b>Dust Pickup Areas</b>
IBH1E IBH2 IBH3W	P-031	<p>The following emission units shall be vented to the common header feeding System 1, which vents to Collectors 1, 2, and 3:</p> <ul style="list-style-type: none"> <li>Shakeout PU Nos. 1 and 2</li> <li>Belt 607-2 PU Nos. 2, 3, 5, and 6</li> <li>Belt 603-2 PU Nos. 1, 2, 3, and 4</li> <li>Hold Over Hopper</li> <li>Primary SO Pan 1A PU No. 1</li> <li>Belt 614-2 PU Nos. 1 and 2</li> <li>Primary SO Pan 2 PU No. 1A</li> <li>Sand Cooling PU Nos. 1 and 2</li> <li>Primary SO Pan 3A PU No. 1 and 2</li> <li>Primary SO PU Nos. 2 and 7</li> <li>Muller 301-2 PU No. 2</li> </ul>
IIBH1E IIBH2 IIBH3 IIBH4W	P-034	<p>The following emission units shall be vented to the common header feeding System 2, which vents to Collectors 1, 2, 3, and 4:</p> <ul style="list-style-type: none"> <li>Belt 601-2 PU No. 1 through 9, &amp; 11</li> <li>Belt 105-2/103F No. 1 and 2</li> <li>P &amp; F Unload Station</li> <li>Muller 301-2 PU No. 1</li> <li>Degate Conv. 803-2A</li> <li>Secondary SO Hood</li> <li>Secondary SO Conveyor Nos. 1 &amp; 2</li> <li>Pan Conveyor Exhaust</li> <li>Cylinder Head Punch Exhaust</li> <li>Belt 609-2 PU Nos. 1 and 2</li> <li>Belt 106 PU No. 1</li> <li>Open End Duct</li> <li>Belt 608-2/609-2 No. 1</li> <li>Belt 608-2 PU No. 1</li> <li>Rotary Screen Nos. 1, 2, and 3</li> <li>Rotary Screen Discharge</li> <li>Belt 611-2 PU No. 1</li> <li>Belt 602-2 PU No. 1</li> <li>Belt 303-2A PU Nos. 1 and 2</li> <li>Belt 603-2 PU Nos. 1, 2, and 3</li> <li>Parting Spray Booth</li> <li>Belt 105-2 PU No. 1</li> <li>Sand Hopper</li> <li>SO Conveyor 803-2 PU No. 1</li> <li>802 Mold Spray System</li> </ul>
IIIBH1S IIIBH2 IIIBH3N	P-010A P-017	<p>The following emission units shall be vented to the combined collection system serving System 3, Collectors 1, 2, and 3:</p> <ul style="list-style-type: none"> <li>D853 Blast Points A, C, D, E, F, K, L</li> <li>D853 Blast W Elevator</li> <li>D853 Blast E Elevator</li> <li>Blast Dropout Box</li> <li>Core Knockout Points D, E, F, &amp; G</li> <li>5 Blast Gates</li> <li>Blast Dropout Hopper</li> </ul>
IVBH1S IVBH2S	P-018 P-019 P-023	<p>The following emission units shall be vented to the combined collection system serving System 4, Collectors 1 and 2:</p> <ul style="list-style-type: none"> <li>Tumblast No. 1 Points A through H</li> <li>Tumblast No. 2 Points A through H</li> <li>Tumblast No. 3 Points A through H</li> <li>Tumblast No. 4 Points A through I</li> <li>Stand Grind (TB)</li> <li>D790 Bin &amp; Plow No. 1</li> <li>D790 Sand Heater</li> <li>D853 Spotblast Points A through D</li> <li>Stand Grinder (Crib)</li> <li>D863 Reblast Points A through I</li> <li>D790 Sand Mixer</li> </ul>

**Reporting & Record keeping:**

Records shall be maintained on site for five (5) years and be available for inspection upon request by representatives of the Department of Natural Resources. These records shall show the following:

- A log of inspections, adjustments, and maintenance performed on the baghouse[s] including replacement of filter bags.

Authority for Requirement: Iowa DNR Construction Permits specified in Table BH2

**Emission Point Characteristics**

These emission points shall conform to the conditions specified in Table BH4.

Table BH4

Emission Point Number	Emission Unit Number	Construction Permit #	Stack Characteristics				
			Height	Diameter (inches)	Exhaust Flowrate (acfm)	Exhaust Temp. (°F)	Vertical Unobstructed Discharge Required?
IBH1E	P-031	77-A-117-S5	80' 5"	47	33,488	100	Yes
IBH2		77-A-118-S5	80' 5"	47	33,488	100	Yes
IBH3W		77-A-119-S5	80' 5"	47	33,488	100	Yes
IIBH1E	P-034	77-A-120-S6	80' 5"	47	35,450	100	Yes
IIBH2		77-A-121-S5	75' 5"	47	35,450	100	Yes
IIBH3		77-A-122-S5	75' 5"	47	35,450	100	Yes
IIBH4W		77-A-123-S5	75' 5"	47	35,450	100	Yes
IIIBH1S	P-010A P-017	77-A-209-S5	88'	60	40,537	100	Yes
IIIBH2		77-A-210-S5	88'	60	40,537	100	Yes
IIIBH3N		77-A-211-S5	88'	60	40,537	100	Yes
IVBH1S	P-018 P-019 P-023	77-A-207-S4	88'	60	40,575	100	Yes
IVBH2S		77-A-208-S4	88'	60	40,575	100	Yes

Authority for Requirement: Iowa DNR Construction Permits specified in Table BH4

It shall be the owner's responsibility to ensure that construction conforms with the emission point characteristics stated above. If it is determined that any of the emission point characteristics are different than stated above, the owner must notify the Department and obtain a construction permit amendment, if required.



### **Periodic Monitoring Requirements**

*The owner/operator of this equipment shall comply with the following periodic monitoring requirements.*

#### **Opacity Monitoring:**

The facility shall check the opacity weekly during a period when the emission unit on this emission point is at or near full capacity and record the reading. Maintain a written record of the observation and any action resulting from the observation for a minimum of five years. Opacity shall be observed to ensure that no visible emissions occur during the material handling operation of the unit. If visible emissions are observed corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If corrective action does not return the observation to no visible emissions, then a Method 9 observation will be required. If an opacity greater than 20% is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet. At least three attempts shall be made to retake opacity readings at approximately 2-hour intervals throughout the day. If all observation attempts for a week have been unsuccessful due to weather, an observation shall be made the next operating day where weather permits.

Authority for Requirement: 567 IAC 22.108(14)

#### **Stack Testing:**

Pollutant - PM<sub>10</sub>

Testing Deadlines - See Table BH5

Test Method - 40 CFR 51, Appendix M, 201A with 202\*

Authority for Requirement - 567 IAC 22.108(3)

Pollutant - Particulate Matter

Testing Deadlines - See Table BH5

Test Method - Iowa Compliance Sampling Manual Method 5\*

Authority for Requirement - 567 IAC 22.108(3)

\* or approved alternative

*The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)*

Table BH5

Emission Point Number	Number of PM <sub>10</sub> Tests Required	Test To Be Completed By	Number of PM Tests Required	Test To Be Completed By
IBH1E	One	May 24, 2004	One	May 24, 2004
IBH2	(1)		(1)	
IBH3W	(1)		(1)	
IIBH1E	(2)		(2)	
IIBH2	One	May 24, 2004	One	May 24, 2004
IIBH3	(2)		(2)	
IIBH4W	One	May 24, 2004	One	May 24, 2004
IIBH1S	One	May 24, 2004	One	May 24, 2004
IIIBH2	(3)		(3)	
IIIBH3N	(3)		(3)	
IVBH1S	One	May 24, 2004	One	May 24, 2004
IVBH2S	(4)		(4)	

Test notes:

- (1) For purposes of this permit, the stack testing required for emission point IBH1E will represent the compliance testing for this emission point.
- (2) For purposes of this permit, the stack testing required for emission points IIBH2 and IIBH4W will represent the compliance testing for this emission point.
- (3) For purposes of this permit, the stack testing required for emission point IIBH1S will represent the compliance testing for this emission point.
- (4) For purposes of this permit, the stack testing required for emission point IVBH1S will represent the compliance testing for this emission point.

**Agency Approved Operation & Maintenance Plan Required?** Yes ☒ No ☐

JDFW shall maintain these baghouses according to John Deere Foundry Waterloo (JDFW) Air Pollution Control Device Preventive Maintenance Plan, attached to this permit as Appendix B.

**Facility Maintained Operation & Maintenance Plan Required?** Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

## **Emission Point ID Number: 012**

### Associated Equipment

Associated Emission Unit ID Number: P-012

Emissions Control Equipment ID Number: 012

Emissions Control Equipment Description: Baghouse

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### Emission Unit Description

Emission Unit vented through this Emission Point: P-012

Emission Unit Description: D802 Tumblast

Raw Material/Fuel: Metal

Rated Capacity: 6.26 ton/hr

### Applicable Requirements

#### Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Fugitive Dust

Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

Authority for Requirement: 567 IAC 23.3(2)"c"

#### Periodic Monitoring Requirements

*The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒**

Authority for Requirement: 567 IAC 22.108(3)"b"

## **Emission Point ID Number: 148**

### Associated Equipment

Associated Emission Unit ID Number: P-148

Emissions Control Equipment ID Number: 148

Emissions Control Equipment Description: Baghouse

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### **Emission Unit Description**

Emission Unit vented through this Emission Point: P-148

Emission Unit Description: D753 New Sand Delivery

Raw Material/Fuel: Sand

Rated Capacity: 1.49 ton/hr

### **Applicable Requirements**

#### **Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Fugitive Dust

Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

Authority for Requirement: 567 IAC 23.3(2)"c"

#### **Periodic Monitoring Requirements**

*The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒**

Authority for Requirement: 567 IAC 22.108(3)"b"

## Emission Point ID Number: See Table FUG

### Emission Unit Description

Table FUG

Emission Point Number	Emission Unit Number	Emission Unit Description	Raw Material	Rated Capacity (ton/hr) <sup>+</sup>
133	P-133	ML802 Ductile Iron Conversion	Metal	11.42
146	P-146	D737 Pouring Floor	Metal	0.17
161	P-161	D775 New Sand Unload Station	Sand	27.79
172	P-172	D850 Sand Transfer-Mud Dock	Sand	1.25
173	P-173	East Sand Pelletizer Loadout	Sand	1.25
CSHED	P-183	Cooling Shed-ML 801 & 802	Metal	24.27
D736FUG	P-205	Plantwide Welding	Welding Rod	0.6 lb/hr
D801FUG	P-123A	ML801 Cooling Area-Pouring/Casting	Metal	22.83
	P-123B	ML801 Casting Cooling Area	Metal	22.83
	P-126	ML801 Shakeout Casting Cooling	Metal	22.83
D802FUG	P-132A	ML802 Cooling Area-Pouring	Metal	11.42
	P-132B	ML802 Cooling Area-Casting	Metal	11.42
D808FUG	P-242	D808 Sand Reclaim-Fugitive	Sand	280.95
D830FUG	P-120B	D830 Iron Inoculation	Inoculate	0.12
	P-120C	D830 Molten Metal Transfer	Metal	72.00
	P-120F	D830 Slag Loadout	Sand	72.00

<sup>+</sup> Except where noted.

### Applicable Requirements

(The following requirements apply to the emission units identified in Table FUG)

#### Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

*The emissions from each emission point identified in Table FUG shall not exceed the levels specified below.*

Pollutant: Fugitive Dust

Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

Authority for Requirement: 567 IAC 23.3(2)"c"

**Periodic Monitoring Requirements**

*The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒**

Authority for Requirement: 567 IAC 22.108(3)"b"

**Emission Point ID Number: See Table FUG2**

### **Emission Unit Description**

Table FUG2

<b>Emission Point Number</b>	<b>Emission Unit Number</b>	<b>Emission Unit Description</b>	<b>Raw Material</b>	<b>Rated Capacity (MMBtu/hr per heater)</b>
182D	P-182D	ML 801, 802 Preheat Pouring Ladle (6) D830 Preheat Tundish Ladle (2)	Natural Gas Natural Gas	2.80 5.45
185D*	P-185D	ML 801, 802 Preheat Pouring Ladle (6) D830 Preheat Tundish Ladle (2)	Propane Propane	2.80 5.45

\* Emission point 185D has been assigned to the same equipment as emission point 182D. Emission point 185D is used when this equipment fires propane instead of natural gas.

### **Applicable Requirements**

(The following requirements apply to the emission units identified in Table FUG2)

#### **Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)**

*The emissions from each emission point identified in Table FUG2 shall not exceed the levels specified below.*

Pollutant: Fugitive Dust

Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

Authority for Requirement: 567 IAC 23.3(2)"c"

#### **Periodic Monitoring Requirements**

*The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒**

Authority for Requirement: 567 IAC 22.108(3)"b"

**Emission Point ID Number: See Table VOC**

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**Emission Unit Description**

Table VOC

<b>Emission Point Number</b>	<b>Associated Emission Unit Number</b>	<b>Associated Emission Unit Description</b>	<b>Raw Material</b>	<b>Capacity</b>
178	P-178	D740 Solvent Degreaser Tank	Solvent Degreaser	0.38 lb/hr
180	P-180	D801 Solvent Degreaser Tank	Solvent Degreaser	0.38 lb/hr

**Applicable Requirements**

(The following requirements apply to the emission units identified in Table VOC)

**Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)**

*The emissions from each emission point described in Table VOC shall not exceed the following specified levels.*

No applicable limits at this time.

**Periodic Monitoring Requirements**

*The owner/operator of each piece of equipment identified in Table VOC shall comply with the following periodic monitoring requirements.*

**Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒**

Authority for Requirement: 567 IAC 22.108(3)"b"



## **Emission Point ID Number: 131**

### Associated Equipment

Associated Emission Unit ID Numbers: P-128; P-131

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### **Emission Unit Description**

Emission Unit vented through this Emission Point: P-128  
Emission Unit Description: Pattern Release Agent Application  
Raw Material/Fuel: Mold Coating  
Rated Capacity: 0.03 tons per hour

Emission Unit vented through this Emission Point: P-131  
Emission Unit Description: ML801 Mold Spray Booth  
Raw Material/Fuel: Mold Coating  
Rated Capacity: 0.35 tons per hour

### **Applicable Requirements**

#### **Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity  
Emission Limit: 40%  
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter  
Emission Limit: 0.01 gr/scf  
Authority for Requirement: 567 IAC 23.4(13)

#### **Periodic Monitoring Requirements**

*The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒**

Authority for Requirement: 567 IAC 22.108(3)"b"

## **IV. General Conditions**

This permit is issued under the authority of the Iowa Code subsection 455B.133(8) and in accordance with 567 Iowa Administrative Code chapter 22.

### **G1. Duty to Comply**

1. The permittee must comply with all conditions of the Title V permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. *567 IAC 22.108(9)"a"*
2. Any compliance schedule shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based. *567 IAC 22.105(2)"h"(3)*
3. Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall be enforceable by the administrator and are incorporated into this permit. *567 IAC 22.108(1)"b"*
4. Unless specified as either "state enforceable only" or "local program enforceable only", all terms and conditions in the permit, including provisions to limit a source's potential to emit, are enforceable by the administrator and citizens under the Act. *567 IAC 22.108(14)*
5. It shall not be a defense for a permittee, in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. *567 IAC 22.108(9)"b"*

### **G2. Permit Expiration**

1. Except as provided in 567 IAC 22.104, the expiration of this permit terminates the permittee's right to operate unless a timely and complete application has been submitted for renewal. Any testing required for renewal shall be completed before the application is submitted. *567 IAC 22.116(2)*
2. To be considered timely, the owner, operator, or designated representative (where applicable) of each source required to obtain a Title V permit shall present or mail the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, 7900 Hickman Rd, Suite #1, Urbandale, Iowa 50322, four or more copies of a complete permit application, at least 6 months but not more than 18 months prior to the date of permit expiration. The definition of a complete application is as indicated in 567 IAC 22.105(2). *567 IAC 22.105*

### **G3. Certification Requirement for Title V Related Documents**

Any application, report, compliance certification or other document submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. All certifications shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. *567 IAC 22.107(4)*

### **G4. Annual Compliance Certification**

By March 31 of each year, the permittee shall submit compliance certifications for the previous calendar year. The certifications shall include descriptions of means to monitor the compliance status of all emissions sources including emissions limitations, standards, and work practices in accordance with applicable requirements. The certification for a source shall include the identification of each term or condition of the permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with all applicable department rules. For sources determined not to be in compliance at the time of compliance certification, a compliance schedule shall be submitted which provides

for periodic progress reports, dates for achieving activities, milestones, and an explanation of why any dates were missed and preventive or corrective measures. The compliance certification shall be submitted to the administrator, director, and the appropriate DNR Field office. 567 IAC 22.108(15)"e"

#### **G5. Semi-Annual Monitoring Report**

By March 31 and September 30 of each year, the permittee shall submit a report of any monitoring required under this permit for the 6 month periods of July 1 to December 31 and January 1 to June 30, respectively. All instances of deviations from permit requirements must be clearly identified in these reports, and the report must be signed by a responsible official, consistent with 567 IAC 22.107(4). The semi-annual monitoring report shall be submitted to the director and the appropriate DNR Field office. 567 IAC 22.108(5)

#### **G6. Annual Fee**

1. The permittee is required under subrule 567 IAC 22.106 to pay an annual fee based on the total tons of actual emissions of each regulated air pollutant. Beginning July 1, 1996, Title V operating permit fees will be paid on July 1 of each year. The fee shall be based on emissions for the previous calendar year.
2. The fee amount shall be calculated based on the first 4,000 tons of each regulated air pollutant emitted each year. The fee to be charged per ton of pollutant will be available from the department by June 1 of each year. The Responsible Official will be advised of any change in the annual fee per ton of pollutant.
3. The following forms shall be submitted annually by March 31 documenting actual emissions for the previous calendar year.
  - a. Form 1.0 "Facility Identification";
  - b. Form 4.0 "Emissions unit-actual operations and emissions" for each emission unit;
  - c. Form 5.0 "Title V annual emissions summary/fee"; and
  - d. Part 3 "Application certification."
4. The fee shall be submitted annually by July 1. The fee shall be submitted with the following forms:
  - a. Form 1.0 "Facility Identification";
  - b. Form 5.0 "Title V annual emissions summary/fee";
  - c. Part 3 "Application certification."
5. If there are any changes to the emission calculation form, the department shall make revised forms available to the public by January 1. If revised forms are not available by January 1, forms from the previous year may be used and the year of emissions documented changed. The department shall calculate the total statewide Title V emissions for the prior calendar year and make this information available to the public no later than April 30 of each year.
6. Phase I acid rain affected units under section 404 of the Act shall not be required to pay a fee for emissions which occur during the years 1993 through 1999 inclusive.
7. The fee for a portable emissions unit or stationary source which operates both in Iowa and out of state shall be calculated only for emissions from the source while operating in Iowa.
8. Failure to pay the appropriate Title V fee represents cause for revocation of the Title V permit as indicated in 567 IAC 22.115(1)"d".

### **G7. Inspection of Premises, Records, Equipment, Methods and Discharges**

Upon presentation of proper credentials and any other documents as may be required by law, the permittee shall allow the director or the director's authorized representative to:

1. Enter upon the permittee's premises where a Title V source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
4. Sample or monitor, at reasonable times, substances or parameters for the purpose of ensuring compliance with the permit or other applicable requirements. *567 IAC 22.108(15)"b"*

### **G8. Duty to Provide Information**

The permittee shall furnish to the director, within a reasonable time, any information that the director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the director copies of records required to be kept by the permit, or for information claimed to be confidential, the permittee shall furnish such records directly to the administrator of EPA along with a claim of confidentiality. *567 IAC 22.108(9)"e"*

### **G9. General Maintenance and Repair Duties**

The owner or operator of any air emission source or control equipment shall:

1. Maintain and operate the equipment or control equipment at all times in a manner consistent with good practice for minimizing emissions.
2. Remedy any cause of excess emissions in an expeditious manner.
3. Minimize the amount and duration of any excess emission to the maximum extent possible during periods of such emissions. These measures may include but not be limited to the use of clean fuels, production cutbacks, or the use of alternate process units or, in the case of utilities, purchase of electrical power until repairs are completed.
4. Schedule, at a minimum, routine maintenance of equipment or control equipment during periods of process shutdowns to the maximum extent possible. *567 IAC 24.2(1)*

### **G10. Recordkeeping Requirements for Compliance Monitoring**

1. In addition to any source specific recordkeeping requirements contained in this permit, the permittee shall maintain the following compliance monitoring records, where applicable:

- a. The date, place and time of sampling or measurements
- b. The date the analyses were performed.
- c. The company or entity that performed the analyses.
- d. The analytical techniques or methods used.
- e. The results of such analyses; and
- f. The operating conditions as existing at the time of sampling or measurement.
- g. The records of quality assurance for continuous compliance monitoring systems (including but not limited to quality control activities, audits and calibration drifts.)

2. The permittee shall retain records of all required compliance monitoring data and support information for a period of at least 5 years from the date of compliance monitoring sample, measurement report or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous compliance monitoring, and copies of all reports required by the permit.

3. For any source which in its application identified reasonably anticipated alternative operating scenarios, the permittee shall:

- a. Comply with all terms and conditions of this permit specific to each alternative scenario.
- b. Maintain a log at the permitted facility of the scenario under which it is operating.
- c. Consider the permit shield, if provided in this permit, to extend to all terms and conditions under each operating scenario. *567 IAC 22.108(4), 567 IAC 22.108(12)*

#### **G11. Evidence Used in Establishing That a Violation Has or Is Occurring**

Notwithstanding any other provisions of these rules, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any provisions herein.

1. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at a source:

- a. A monitoring method approved for the source and incorporated in an operating permit pursuant to 567 Chapter 22;
- b. Compliance test methods specified in 567 Chapter 25; or
- c. Testing or monitoring methods approved for the source in a construction permit issued pursuant to 567 Chapter 22.

2. The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:

- a. Any monitoring or testing methods provided in these rules; or
- b. Other testing, monitoring, or information gathering methods that produce information comparable to that produced by any method in subrule 21.5(1) or this subrule. *567 IAC 21.5(1)-567 IAC 21.5(2)*

#### **G12. Prevention of Accidental Release: Risk Management Plan Notification and Compliance Certification**

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Act, the permittee shall notify the department of this requirement. The plan shall be filed with all appropriate authorities by the deadline specified by EPA. A certification that this risk management plan is being properly implemented shall be included in the annual compliance certification of this permit. *567 IAC 22.108(6)*

#### **G13. Hazardous Release**

The permittee must report any situation involving the actual, imminent, or probable release of a hazardous substance into the atmosphere which, because of the quantity, strength and toxicity of the substance, creates an immediate or potential danger to the public health, safety or to the environment. A verbal report shall be made to the department at (515) 281-8694 and to the local police department or the office of the sheriff of the affected county as soon as possible but not later than six hours after the discovery or onset of the condition. This verbal report must be followed up with a written report as indicated in 567 IAC 131.2(2). *567 IAC Chapter 131-State Only*

#### **G14. Excess Emissions and Excess Emissions Reporting Requirements**

1. Excess Emissions. Excess emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if the startup, shutdown or cleaning is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Cleaning of control equipment which does not require the shutdown of the process equipment shall be limited to one six-minute period per one-hour period. An incident of excess emission (other than an incident during startup, shutdown or cleaning of control equipment) is a

violation. If the owner or operator of a source maintains that the incident of excess emission was due to a malfunction, the owner or operator must show that the conditions which caused the incident of excess emission were not preventable by reasonable maintenance and control measures. Determination of any subsequent enforcement action will be made following review of this report. If excess emissions are occurring, either the control equipment causing the excess emission shall be repaired in an expeditious manner or the process generating the emissions shall be shutdown within a reasonable period of time. An expeditious manner is the time necessary to determine the cause of the excess emissions and to correct it within a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process equipment or control equipment. In the case of an electric utility, a reasonable period of time is eight hours plus the period of time until comparable generating capacity is available to meet consumer demand with the affected unit out of service, unless, the director shall, upon investigation, reasonably determine that continued operation constitutes an unjustifiable environmental hazard and issue an order that such operation is not in the public interest and require a process shutdown to commence immediately.

## 2. Excess Emissions Reporting

a. Oral Reporting of Excess Emissions. An incident of excess emission (other than an incident of excess emission during a period of startup, shutdown, or cleaning) shall be reported to the appropriate field office of the department within eight hours of, or at the start of the first working day following the onset of the incident. The reporting exemption for an incident of excess emission during startup, shutdown or cleaning does not relieve the owner or operator of a source with continuous monitoring equipment of the obligation of submitting reports required in 567-subrule 25.1(6). An oral report of excess emission is not required for a source with operational continuous monitoring equipment (as specified in 567-subrule 25.1(1) ) if the incident of excess emission continues for less than 30 minutes and does not exceed the applicable visible emission standard by more than 10 percent opacity. The oral report may be made in person or by telephone and shall include as a minimum the following:

- i. The identity of the equipment or source operation from which the excess emission originated and the associated stack or emission point.
- ii. The estimated quantity of the excess emission.
- iii. The time and expected duration of the excess emission.
- iv. The cause of the excess emission.
- v. The steps being taken to remedy the excess emission.
- vi. The steps being taken to limit the excess emission in the interim period.

b. Written Reporting of Excess Emissions. A written report of an incident of excess emission shall be submitted as a follow-up to all required oral reports to the department within seven days of the onset of the upset condition, and shall include as a minimum the following:

- i. The identity of the equipment or source operation point from which the excess emission originated and the associated stack or emission point.
- ii. The estimated quantity of the excess emission.
- iii. The time and duration of the excess emission.
- iv. The cause of the excess emission.
- v. The steps that were taken to remedy and to prevent the recurrence of the incident of excess emission.

- vi. The steps that were taken to limit the excess emission.
- vii. If the owner claims that the excess emission was due to malfunction, documentation to support this claim. *567 IAC 24.1(1)-567 IAC 24.1(4)*

3. Emergency Defense for Excess Emissions. For the purposes of this permit, an “emergency” means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include non-compliance, to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation or operator error. An emergency constitutes an affirmative defense to an action brought for non-compliance with technology based limitations if it can be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that:

- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
- b. The facility at the time was being properly operated;
- c. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements of the permit; and
- d. The permittee submitted notice of the emergency to the director by certified mail within two working days of the time when the emissions limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. *567 IAC 22.108(16)*

#### **G15. Permit Deviation Reporting Requirements**

A deviation is any failure to meet a term, condition or applicable requirement in the permit. Reporting requirements for deviations that result in a hazardous release or excess emissions have been indicated above (see G13 and G14). Unless more frequent deviation reporting is specified in the permit, any other deviation shall be documented in the semi-annual monitoring report and the annual compliance certification (see G4 and G5). *567 IAC 22.108(5)"b"*

#### **G16. Notification Requirements for Sources That Become Subject to NSPS and NESHAP Regulations**

During the term of this permit, the permittee must notify the department of any source that becomes subject to a standard or other requirement under 567-subrule 23.1(2) (standards of performance of new stationary sources) or section 111 of the Act; or 567-subrule 23.1(3) (emissions standards for hazardous air pollutants), 567-subrule 23.1(4) (emission standards for hazardous air pollutants for source categories) or section 112 of the Act. This notification shall be submitted in writing to the department pursuant to the notification requirements in 40 CFR Section 60.7, 40 CFR Section 61.07, and/or 40 CFR Section 63.9. *567 IAC 23.1(2), 567 IAC 23.1(3), 567 IAC 23.1(4)*

#### **G17. Requirements for Making Changes to Emission Sources That Do Not Require Title V Permit Modification**

1. Off Permit Changes to a Source. Pursuant to section 502(b)(10) of the CAAA, the permittee may make changes to this installation/facility without revising this permit if:

- a. The changes are not major modifications under any provision of any program required by section 110 of the Act, modifications under section 111 of the act, modifications under section 112 of the act, or major modifications as defined in 567 IAC Chapter 22.

- b. The changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions);
- c. The changes are not modifications under any provisions of Title I of the Act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or as total emissions);
- d. The changes are not subject to any requirement under Title IV of the Act.
- e. The changes comply with all applicable requirements.
- f. For such a change, the permitted source provides to the department and the administrator by certified mail, at least 30 days in advance of the proposed change, a written notification, including the following, which must be attached to the permit by the source, the department and the administrator:
  - i. A brief description of the change within the permitted facility,
  - ii. The date on which the change will occur,
  - iii. Any change in emission as a result of that change,
  - iv. The pollutants emitted subject to the emissions trade
  - v. If the emissions trading provisions of the state implementation plan are invoked, then Title V permit requirements with which the source shall comply; a description of how the emissions increases and decreases will comply with the terms and conditions of the Title V permit.
  - vi. A description of the trading of emissions increases and decreases for the purpose of complying with a federally enforceable emissions cap as specified in and in compliance with the Title V permit; and
  - vii. Any permit term or condition no longer applicable as a result of the change.

*567 IAC 22.110(1)*

2. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements. *567 IAC 22.110(2)*

3. Notwithstanding any other part of this rule, the director may, upon review of a notice, require a stationary source to apply for a Title V permit if the change does not meet the requirements of subrule 22.110(1). *567 IAC 22.110(3)*

4. The permit shield provided in subrule 22.108(18) shall not apply to any change made pursuant to this rule. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the state implementation plan authorizing the emissions trade. *567 IAC 22.110(4)*

5. Aggregate Insignificant Emissions. The permittee shall not construct, establish or operate any new insignificant activities or modify any existing insignificant activities in such a way that the emissions from these activities no longer meet the criteria of aggregate insignificant emissions. If the aggregate insignificant emissions are expected to be exceeded, the permittee shall submit the appropriate permit modification and receive approval prior to making any change. *567 IAC 22.103(2)*

6. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes, for changes that are provided for in this permit. *567 IAC 22.108(11)*



## **G18. Duty to Modify a Title V Permit**

### **1. Administrative Amendment.**

- a. An administrative permit amendment is a permit revision that is required to do any of the following:
  - i. Correct typographical errors
  - ii. Identify a change in the name, address, or telephone number of any person identified in the permit, or provides a similar minor administrative change at the source;
  - iii. Require more frequent monitoring or reporting by the permittee; or
  - iv. Allow for a change in ownership or operational control of a source where the director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittee has been submitted to the director.
- b. The permittee may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request. The request shall be submitted to the director.
- c. Administrative amendments to portions of permits containing provisions pursuant to Title IV of the Act shall be governed by regulations promulgated by the administrator under Title IV of the Act.

### **2. Minor Permit Modification.**

- a. Minor permit modification procedures may be used only for those permit modifications that do any of the following:
  - i. Do not violate any applicable requirements
  - ii. Do not involve significant changes to existing monitoring, reporting or recordkeeping requirements in the Title V permit.
  - iii. Do not require or change a case by case determination of an emission limitation or other standard, or increment analysis.
  - iv. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed in order to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include any federally enforceable emissions caps which the source would assume to avoid classification as a modification under any provision under Title I of the Act; and an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Act.;
  - v. Are not modifications under any provision of Title I of the Act; and
  - vi. Are not required to be processed as significant modification.
- b. An application for minor permit revision shall be on the minor Title V modification application form and shall include at least the following:
  - i. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs.
  - ii. The permittee's suggested draft permit
  - iii. Certification by a responsible official, pursuant to 567 IAC 22.107(4), that the proposed modification meets the criteria for use of a minor permit modification procedures and a request that such procedures be used; and

iv. Completed forms to enable the department to notify the administrator and the affected states as required by 567 IAC 22.107(7).

c. The permittee may make the change proposed in its minor permit modification application immediately after it files the application. After the permittee makes this change and until the director takes any of the actions specified in 567 IAC 22.112(4) "a" to "c", the permittee must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time, the permittee need not comply with the existing permit terms and conditions it seeks to modify. However, if the permittee fails to comply with its proposed permit terms and conditions during this time period, existing permit terms and conditions it seeks to modify may subject the facility to enforcement action.

3. Significant Permit Modification. Significant Title V modification procedures shall be used for applications requesting Title V permit modifications that do not qualify as minor Title V modifications or as administrative amendments. These include but are not limited to all significant changes in monitoring permit terms, every relaxation of reporting or recordkeeping permit terms, and any change in the method of measuring compliance with existing requirements. Significant Title V modifications shall meet all requirements of 567 IAC Chapter 22, including those for applications, public participation, review by affected states, and review by the administrator, and those requirements that apply to Title V issuance and renewal. 567 IAC 22.111-567 IAC 22.113 The permittee shall submit an application for a significant permit modification not later than three months after commencing operation of the changed source unless the existing Title V permit would prohibit such construction or change in operation, in which event the operation of the changed source may not commence until the department revises the permit. 567 IAC 22.105(1)"a"(4)

#### **G19. Duty to Obtain Construction Permits**

Unless exempted under 567 IAC 22.1(2), the permittee must not construct, install, reconstruct, or alter any equipment, control equipment or anaerobic lagoon without first obtaining a construction permit, conditional permit, or permit pursuant to 567 IAC 22.8, or permits required pursuant to 567 IAC 22.4 and 567 IAC 22.5. Such permits shall be obtained prior to the initiation of construction, installation or alteration of any portion of the stationary source. 567 IAC 22.1(1)

#### **G20. Asbestos**

The permittee shall comply with 567 IAC 23.1(3)"a", and 567 IAC 23.2(3)"g" when conducting any renovation or demolition activities at the facility. 567 IAC 23.1(3)"a", and 567 IAC 23.2

#### **G21. Open Burning**

The permittee is prohibited from conducting open burning, except as may be allowed by 567 IAC 23.2. 567 IAC 23.2 except 23.2(3)"h"; 567 IAC 23.2(3)"h" - State Only

#### **G22. Acid Rain (Title IV) Emissions Allowances**

The permittee shall not exceed any allowances that it holds under Title IV of the Act or the regulations promulgated there under. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners and operators of the unit or the designated representative of the owners and operators is prohibited. Exceedences of applicable emission rates are prohibited. "Held" in this context refers to both those allowances assigned to the owners and operators by USEPA, and those allowances supplementally acquired by the owners and operators. The use of any allowance prior to the year for which it was allocated is prohibited. Contravention of any other provision of the permit is prohibited. 567 IAC 22.108(7)

### **G23. Stratospheric Ozone and Climate Protection (Title VI) Requirements**

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
  - a. All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to § 82.106.
  - b. The placement of the required warning statement must comply with the requirements pursuant to § 82.108.
  - c. The form of the label bearing the required warning statement must comply with the requirements pursuant to § 82.110.
  - d. No person may modify, remove, or interfere with the required warning statement except as described in § 82.112.
2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:
  - a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156.
  - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158.
  - c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161.
  - d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with reporting and recordkeeping requirements pursuant to § 82.166. ("MVAC-like appliance" as defined at § 82.152)
  - e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to § 82.156.
  - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.
3. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.
4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant,
5. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *40 CFR part 82*

## **G24. Permit Reopenings**

1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. *567 IAC 22.108(9)"c"*
2. Additional applicable requirements under the Act become applicable to a major part 70 source with a remaining permit term of 3 or more years. Revisions shall be made as expeditiously as practicable, but not later than 18 months after the promulgation of such standards and regulations.
  - a. Reopening and revision on this ground is not required if the permit has a remaining term of less than three years;
  - b. Reopening and revision on this ground is not required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii) as amended to June 25, 1993.
  - c. Reopening and revision on this ground is not required if the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. *567 IAC 22.108(17)"a", 567 IAC 22.108(17)"b"*
3. A permit shall be reopened and revised under any of the following circumstances:
  - a. The department receives notice that the administrator has granted a petition for disapproval of a permit pursuant to 40 CFR 70.8(d) as amended to June 25, 1993, provided that the reopening may be stayed pending judicial review of that determination;
  - b. The department or the administrator determines that the Title V permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Title V permit;
  - c. Additional applicable requirements under the Act become applicable to a Title V source, provided that the reopening on this ground is not required if the permit has a remaining term of less than three years, the effective date of the requirement is later than the date on which the permit is due to expire, or the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. Such a reopening shall be complete not later than 18 months after promulgation of the applicable requirement.
  - d. Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the acid rain program. Upon approval by the administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.
  - e. The department or the administrator determines that the permit must be revised or revoked to ensure compliance by the source with the applicable requirements. *567 IAC 22.114(1)*
4. Proceedings to reopen and reissue a Title V permit shall follow the procedures applicable to initial permit issuance and shall effect only those parts of the permit for which cause to reopen exists. *567 IAC 22.114(2)*

**G25. Permit Shield**

Compliance with the conditions of this permit shall be deemed compliance with the applicable requirements included in this permit as of the date of permit issuance.

This permit shield shall not alter or affect the following:

1. The provisions of section 303 of the Act (emergency orders), including the authority of the administrator under that section;
2. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
3. The applicable requirements of the acid rain program, consistent with section 408(a) of the Act;
4. The ability of the department or the administrator to obtain information from the facility pursuant to section 114 of the Act. *567 IAC 22.108(18)*

**G26. Severability**

The provisions of this permit are severable and if any provision or application of any provision is found to be invalid by this department or a court of law, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected by such finding. *567 IAC 22.108(8)*

**G27. Property Rights**

The permit does not convey any property rights of any sort, or any exclusive privilege. *567 IAC 22.108(9)"d"*

**G28. Transferability**

This permit is not transferable from one source to another. If title to the facility or any part of it is transferred, an administrative amendment to the permit must be sought to determine transferability of the permit. *567 IAC 22.111(1)"d"*

**G29. Disclaimer**

No review has been undertaken on the engineering aspects of the equipment or control equipment other than the potential of that equipment for reducing air contaminant emissions. *567 IAC 22.3(3)"c"*

**G30. Notification and Reporting Requirements for Stack Tests or Monitor Certification**

The permittee shall notify the department's stack test contact in writing not less than 30 days before a required test or performance evaluation of a continuous emission monitor is performed to determine compliance with an applicable requirement. For the department to consider test results a valid demonstration of compliance with applicable rules or a permit condition, such notice shall be given. Such notice shall include the time, the place, the name of the person who will conduct the test and other information as required by the department. Unless specifically waived by the department's stack test contact, a pretest meeting shall be held not later than 15 days prior to conducting the compliance demonstration. The department may accept a testing protocol in lieu of a pretest meeting. A representative of the department shall be permitted to witness the tests. Results of the tests shall be submitted in writing to the department's stack test contact in the form of a comprehensive report within six weeks of the completion of the testing. Compliance tests conducted pursuant to this permit shall be conducted with the source operating in a normal manner at its maximum continuous output as rated by the equipment manufacturer, or the rate specified by the owner as the maximum production rate at which the source shall be operated. In cases where compliance is to be demonstrated at less than the maximum continuous output as rated by the equipment manufacturer, and it is the owner's intent to limit the capacity to that rating, the owner may submit evidence to the department that the source has been physically

altered so that capacity cannot be exceeded, or the department may require additional testing, continuous monitoring, reports of operating levels, or any other information deemed necessary by the department to determine whether such source is in compliance.

Stack test notifications, reports and correspondence shall be sent to:

Stack Test Review Coordinator  
Iowa DNR, Air Quality Bureau  
7900 Hickman Road, Suite #1  
Urbandale, IA 50322  
(515) 242-6001

Within Polk and Linn Counties, stack test notifications, reports and correspondence shall also be directed to the supervisor of the respective county air pollution program.

*567 IAC 25.1(7)"a", 567 IAC 25.1(9)*

### **G31. Prevention of Air Pollution Emergency Episodes**

The permittee shall comply with the provisions of 567 IAC Chapter 26 in the prevention of excessive build-up of air contaminants during air pollution episodes, thereby preventing the occurrence of an emergency due to the effects of these contaminants on the health of persons.

*567 IAC 26.1(1)*

### **G32. Contacts List**

The current address and phone number for reports and notifications to the EPA administrator is:

Chief of Air Permits  
EPA Region 7  
Air Permits and Compliance Branch  
901 N. 5<sup>th</sup> Street  
Kansas City, KS 66101  
(913) 551-7020

The current address and phone number for reports and notifications to the department or the Director is:

Chief, Air Quality Bureau

Iowa Department of Natural Resources  
7900 Hickman Road, Suite #1  
Urbandale, IA 50322  
(515) 242-5100

Reports or notifications to the DNR Field Offices or local programs shall be directed to the supervisor at the appropriate field office or local program. Current addresses and phone numbers are:

#### **Field Office 1**

909 West Main – Suite 4  
Manchester, IA 52057  
(563) 927-2640

#### **Field Office 2**

P.O. Box 1443  
2300-15th St., SW  
Mason City, IA 50401  
(641) 424-4073

#### **Field Office 3**

1900 N. Grand Ave.  
Spencer, IA 51301  
(712) 262-4177

#### **Field Office 4**

1401 Sunnyside Lane  
Atlantic, IA 50022  
(712) 243-1934

#### **Field Office 5**

401 SW 7<sup>th</sup> Street, Suite I  
Des Moines, IA 50309  
(515) 725-0268

#### **Field Office 6**

1004 W. Madison  
Washington, IA 52353  
(319) 653-2135

#### **Polk County Public Health Dept.**

Air Quality Division  
5885 NE 14th St.  
Des Moines, IA 50313  
(515) 286-3351

#### **Linn County Public Health Dept.**

Air Pollution Control Division  
501 13th St., NW  
Cedar Rapids, IA 52405  
(319) 892-6000

## **V. Appendix A: DNR Air Quality Policy 3-b-08, Opacity Limits**



1998 NOV 13 4

IOWA DEPARTMENT OF NATURAL RESOURCES  
ENVIRONMENTAL PROTECTION DIVISION

POLICY/PROCEDURE STATEMENT

<b>TOPIC:</b> <u>Opacity Limits</u>
-------------------------------------

**Policy Procedure Number:**    3-b-08

**Replaces Number:**    None


**Date:**

**Effective Date:**    November 12, 1998

**Preparer:**    David Phelps

**Reviewer:**

**Approval:**    **Bureau Chief:** Peter Hamlin

 **Date:** 11/12/98

**Division Administrator:** Allan Stokes

 **Date:** 11/12/98

**Applicable Code of Iowa or Iowa Administrative Code Rule:**    23.3(2)d

**“No person shall allow, cause or permit the emission of visible air contaminants into the atmosphere from any equipment, internal combustion engine, premise fire, open fire or stack, equal to or in excess of 40 percent opacity or that level specified in a construction permit, except as provided below and in 567-Chapter 24.”**

**REASON OR BACKGROUND**

The default opacity limit allowed by regulation is 40%. This limit was established with the original regulations in 1970. It is generally accepted that opacity greater than 40% was evidence of a mass emission standard exceedence. More recently, there have been requests from facilities for limits much lower than that allowed by the regulations, in some cases less than 0.01 gr/scf to which a 40% opacity limit does not correspond. Since opacity is used as an indicator of the particulate emission rate, listing an indicated potential problem opacity that is more in line with the mass emission rate is useful. In order to have the authority to set limits lower than 40%, subrule 23.3(2)d was changed. This change allows the department the ability to set opacity limits at a level that more closely corresponds to what would be observed by the source when operating in compliance with its mass emission rate.

Except in the case where a specific opacity limit is established by rule, it has been the general policy of the Department not to take action on opacity limits directly. Rather, if it is felt that a violation of the mass emission rate exists that is not attributable to some abnormal event, a stack test would be required to verify compliance. However, the Department reserves the right to use the results of formal opacity readings as evidence of an exceedence.

## DETAILS

It shall be the policy of the Department to list the default opacity as a permit condition and in addition an indicator opacity may be listed.

For ease of proving continual compliance a source may request a 'no visible emissions' opacity limit which allows proof of compliance without having a certified opacity reading taken. In this case any visible emissions would be an exceedence.

The IDNR permit writer may list an opacity that will be a indicator of possible mass emission rate exceedence. If the permittee wishes, the recommended indicator opacity may be changed by demonstrating compliance with the mass emission rate during a stack test while emitting the new desired indicator opacity. If the tested mass emission rate is less than the permitted emission rate, then the desired indicator opacity may be set at a proportionally higher level than observed during the stack test.

If an opacity measurement, taken in accordance with an approved reference method for opacity, (generally USEPA Method 9 or 22) exceeds the indicator opacity then the facility will promptly investigate the source and make corrections. However, if after corrections are made the opacity continues to exceed the indicator opacity the Department may require additional proof to demonstrate compliance with the mass emissions limits.

### **Recommended indicator opacities shall be:**

<b>Grain Loading gr./scf</b>	<b>Recommended Indicator Opacity</b>
<0.01 gr./scf	non specified in permit *
0.01 to 0.06 gr./scf	10% Opacity
0.061 to 0.08 gr./scf	20% Opacity
0.081 to 0.1 gr./scf	25% Opacity

\* A line is added to the permit that states: "If visible emissions are observed other than start-up, shut-down, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard."

If a source is a batch process the indicator opacity shall be based on the table above, but the opacity averaging period, for comparison to the indicator opacity, shall be the entire batch cycle. For purposes of comparison the indicator opacity readings shall be taken during the entire cycle and averaged.

Sources are also given the opportunity to set source specific limits to be coordinated with the initial compliance test. These may then be incorporated into the permit.

In all cases an exceedence of the indicator opacity will require the permittee to file an "indicator opacity exceedence report" to the IDNR regional office. The reporting requirements shall be:

*Oral report of excess indicator opacity.* An incident of excess indicator opacity (other than an incident of excess indicator opacity during a period of startup, shutdown, or cleaning) shall be reported to the appropriate regional office of the department within eight hours of, or at the start of the first working day following the onset of the of the incident. The reporting exemption for an incident of excess indicator opacity during startup and shutdown or cleaning does not relieve the owner or operator of a source with continuous monitoring equipment of the obligation of submitting reports required in subrule 25.1(6).

An oral report of excess indicator opacity is not required for a source with operational continuous monitoring equipment (as specified in subrule 25.1(1) if the incident of excess indicator opacity continues for less than 30 minutes and does not exceed the applicable visible emission standard by more than 10 percent opacity.

The oral report may be made in person or by telephone and shall include as a minimum the following:

- a) The identity of the equipment or source operation from which the excess indicator opacity originated and the associated stack or emission point.
- b) The estimated quantity of the excess indicator opacity.
- c) The time and expected duration of the excess indicator opacity.
- d) The cause of the excess indicator opacity.
- e) The steps being taken to remedy the excess indicator opacity.
- f) The steps being taken to limit the excess indicator opacity in the interim period.

*Written report of excess indicator opacity.* A written report of an incident of excess indicator opacity shall be submitted as a follow-up to all required oral reports to the department within seven (7) days of the onset of the upset condition, and shall include as a minimum the following:

- a) The identity of the equipment or source operation point from which the excess emission originate and the associated stack or emission point.
- b) The estimated quantity of the excess indicator opacity.
- c) The time and duration of the excess indicator opacity.
- d) The cause of the excess indicator opacity.
- e) The steps that were taken to remedy and to prevent the recurrence of the incident of excess indicator opacity.
- f) The steps that were taken to limit the excess indicator opacity.
- g) If the owner claims that the excess indicator opacity was due to malfunction, documentation to support this claim.

Exceptions to this policy:

- 1) In the case where a facility has an opacity limit established in an existing permit, no change will be made to that permit limit unless the permit is being modified for other purposes.
- 2) If the facility has a continuous opacity monitor, this policy shall not apply.
- 3) This policy shall not apply to opacity limits established in Prevention of Significant Deterioration (PSD) permits or permits that were established for maintenance plans for nonattainment areas.
- 4) This policy shall not apply where an opacity limit is established as an indication of hazardous air pollutants.

- 5) This policy shall not apply where an opacity limit is established by a rule, New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAPS), etc.

## **VI. Appendix B: John Deere Foundry Waterloo (JDFW) Air Pollution Control Device Preventive Maintenance Plan**

### **Record Keeping and Reporting:**

Maintenance records shall be maintained on site for five (5) years and be available for inspection upon request by representatives of the Department of Natural Resources.

Authority for Requirement: 567 IAC 22.108(3)"b"

Periodic Monitoring is not required during periods of time greater than one day in which the source does not operate.

The following table correlates the equipment numbers in the JDFW Maintenance Plan with Title V emission point numbers.

<b>JDFW Equipment Number</b>	<b>Title V Emission Point Number</b>	<b>Title V Emission Unit Number</b>	<b>Emission Unit Description</b>
416-11-A1936	248	P-248	ML801 Primary and Secondary Shakeout and Miscellaneous Sand Equipment
416-11-A1971	249		
410-PD-A0382	CLRBH #1	P-009A	D850 Primary Blast Cabinet
410-PB-A0375	CLRBH #2	P-010	D850 Core Knockout Cabinet
410-PA-A1061	CLRBH #3	P-011A	D850 Spotblast Cabinet
416-11-A2051	IFBH	P-3IF	Induction Furnaces (3)
416-06-A2732	IBH1E	P-031	ML802 Casting & Sand Grinding-System I
416-06-A2735	IBH2		
416-06-A2738	IBH3W		
416-06-A2741	IIBH1E	P-034	ML802 Casting & Sand Grinding-System II
416-06-A2744	IIBH2		
416-06-A2747	IIBH3		
416-06-A2750	IIBH4W		
416-07-A1780	IIIBH1S	P-010A P-017	D853 Core Knockout-System III D853 Primary Blast Cabinet
416-35-A1890	IIIBH2		
416-35-A1891	IIIBH3N		
416-06-A2869	IVBH1S	P-018 P-019	D853 Spotblast Cabinet-System IV D863 Reblast Cabinet-System IV D851 Tumblast Machines-System IV
416-06-A2872	IVBH2S	P-023	

**John Deere Foundry Waterloo**

**Air Pollution Control Device  
Preventive Maintenance Plan**

**Revised 3-27-2002**

## **John Deere Foundry Waterloo Preventive Maintenance of Environmental Control Equipment**

### **Objective**

The objective of our environmental control equipment preventive maintenance program is to maintain all environmental control equipment in such a way as to maximize performance and minimize any emissions.

The key elements to our program are Electronic Monitoring, Routine Preventive Maintenance and Major Preventive Maintenance.

### **Electronic Monitoring**

Approximately 50% of our externally exhausted dust collectors are equipped with electronic stack emission sensors. These sensors detect particulate discharge and alarm, or in some cases shut down, all or part of the collector. We use two types of stack sensors. One is a probe style sensor that uses triboelectric current to sense particles impacting or passing close to the probe. The other is a continuous particulate monitor that uses a light beam to detect moving particles in the airstream.

The stack emissions sensor is a reactive measure. In addition, we utilize electronic monitoring of the collector differential pressure to give us a continuous reading of the overall collector operation and condition. With differential pressure monitoring and control, we can take a proactive look at what is happening inside the collector. Differential pressure is the heartbeat of the collector. Once the collector operating range has been established, changes in the differential pressure above or below the normal operating range is investigated as a potential indicator of a developing problem. These changes can result from a problem in the cleaning system such as a blown diaphragm in a pulse cleaning valve, a bag down, buildup of material in the discharge hopper or a change in the material being filtered by the collector. The high/low settings on our monitoring equipment allows us to react and correct the problem, thus preventing damage to a filter bag or cartridge.

### **Routine and Major Preventive Maintenance**

To be sure we achieve our objective, we must complement our electronic monitoring with an effective preventive maintenance inspection and repair program. We categorized this inspection as routine and major. The routine preventive maintenance parallels the electronic monitoring. The major inspection is where we open up the collector and do a very complete inspection and on-the-spot repair of the unit.

Our preventive maintenance inspection program is a computer-based program which is automatically generated based on the yearly calendar. Preventive maintenance inspection work orders are generated from this system on a weekly, monthly, quarterly or semi-annual basis. Copies of each preventive maintenance work order for our environmental preventive maintenance program are presented in the sections that follow. The frequencies of inspections are based upon manufacturer's recommendation and equipment performance and reliability. The inspections require the signature of the trades person performing the work and his or her supervisor upon completion. All completed environmental preventive maintenance inspection

forms and follow-up work orders will be filed and kept for a three-year period in the maintenance area.

To minimize the amount and duration of any excess emissions, we have implemented a Dust Collector Stack Emissions Alarm Procedure which is posted at each collector control panel. Copies of this procedure are included in the following sections. To expedite response time and corrective action, our skilled trades employees and their respective supervisors have been given the authority to shut down operations associated with such emissions.

To take our program one step further, we have established a visual preventive maintenance inspection route in which all of our dust collection control equipment exhaust stacks will be looked at each day.

The following manual contains a listing of our dust collection control equipment required by Title V. A set of General Procedures gives an overview of the PM information for the various collector types. Following these are copies of the preventive maintenance inspection forms which also describe the schedule frequency for each collector. Following the sections with the inspection forms is a repair parts listing of items maintained in inventory for the dust collectors.



**John Deere Foundry Waterloo**  
**Maintenance – Standard Procedure**

1 June 1998

## **Standard Operating Procedure Preventive Maintenance Instructions for John Deere Foundry Equipment**

### **Scope**

This procedure pertains to scheduled preventive maintenance instructions for John Deere Foundry facilities and equipment maintenance.

### **Purpose**

To provide guidelines for generation, distribution and execution of scheduled preventive maintenance instructions (P.M.s) for foundry equipment to ensure that foundry equipment is inspected and maintained to perform to desired specifications.

### **General**

Preventive maintenance instructions are generated by the system at a frequency determined by Mechanical Services. The maintenance management system program resides on and is owned by Waterloo Operations Systems. Mechanical Services is the owner of the information on the system which pertains to Foundry equipment. The information is maintained live and current on the system by the Engineering Analysts and Planners within Mechanical Services.

P.M.s are generated with a unique work order number and a due date for completion. These instructions are delivered to the skilled trades person for completion. When the skilled trades person completes the work, he or she acknowledges through the payroll system that the work has been done. A record of this completion is retained on the system.

### **Definitions**

P.M.s are categorized as four different types to comply with different operational requirements of our facility. The Categories are Normal or Routine, OSHA, Environmental Control Equipment and Process Control Equipment. All category types are generated and maintained on the system the same manner. The differences are in the documentation requirements.

#### **Normal or Routine**

- These P.M.s do not require special treatment. They are generated, completed and a record verifying completion is retained on the system.

#### **OSHA**

- OSHA P.M.s are inspections that are performed on equipment for which OSHA has identified a legal need for routine inspection and maintenance. These P.M.s are developed and generated on the system the same as the normal P.M.s, but OSHA requires that we retain the actual P.M. instruction with the skilled trades person and

his or her supervisor's signatures for five years as proof performance. These hard copies are filed in the Mechanical Services office.

### **Environmental**

- Environmental P.M.s are inspections generated as a result of our Environmental Control Equipment Maintenance Plan developed for the IDNR. These P.M.s are also developed, generated and maintained on the system but IDNR requires that we retain the actual P.M. instruction with the signatures of the skilled trades person, his/her supervisor and the Engineering Analyst maintaining the inspection programs for five years as proof performance. In addition to the P.M. instruction all work orders generated from this inspection must be completed, signed and retained with the completed instruction. These hard copies are filed and maintained by the Engineering Analyst responsible for P.M. and inspection in the Mechanical Services office.

### **Process**

- Process P.M.s are instructions generated for process equipment at the request of the process engineer. These instructions provide space for recording data. They are completed, signed by the craftsperson and given to or filed for the requesting Process Engineer.

## **P.M. Instructions**

### **Work Responsibility:**

### **Action:**

#### **Establish P.M. Instructions**

Plant Engineers  
Maintenance Supervisors  
Engineering Analysts  
Process Engineer

1. P.M inspection instructions are established for equipment at the time of the initial purchase. The inspection instructions are based upon manufacturer's recommendations and in house experience for like equipment.

Engineering Analyst

2. A unique brass tag (asset number) is assigned to the equipment and the inspection and lubrication information is inputted into the Maintenance Management System (M.A.I.N).

3. Each P.M. instruction is coded to provide information to M.A.I.N so automatic generation will execute at the desired frequency. Examples: weekly, bi-weekly, monthly, bi-monthly, quarterly, semi-annually and annually.

4. Each P.M. instruction is assigned a category code for type tracking purposes. Category 01 is a Normal or Routine Inspection assigned to a maintenance employee; Category 06 is an inspection performed by the P.M. and inspection team; Category 09 is an environmental inspection; Category 10 is an OSHA inspection.

### **Preventive Maintenance Scheduling and Execution**

Engineering Analyst  
Maintenance Planner

1. The computer-generated hard copies of the P.M. instructions are sorted and distributed to the proper maintenance craftsman for completion. The computer automatically adds the P.M. instruction and its unique work order to the craftsman's work schedule.

Maintenance Craftsman

2. The craftsman performs the inspection and completes the information requested on the instruction sheet. If during the inspection a deficiency is found which can not be corrected at that time, the craftsman will write a work order for the task to be completed. He/she will sign the hard copy signifying that the inspection has been completed.

Maintenance Craftsman  
Maintenance Supervisor

3. Work orders written during the inspection will be automatically entered on the area craftsman's work schedule. When the work order is completed the craftsman will indicate as he/she reports labor that the work has been completed. This will then close out the work order.

Maintenance Craftsman  
Maintenance Supervisor  
Engineering Analyst

4. The hard copy of the preventive maintenance instruction for all environmental control equipment must be completed and signed by the craftsman and his or her supervisor. This P.M. inspection must then be filed as proof of performance.

5. The hard copy of the preventive maintenance instruction for all environmental control equipment must be completed and signed by the craftsperson, his or her supervisor and the engineering analyst responsible for P.M. and inspections. This P.M inspection must then be filed as proof of performance. All work orders generated from the environmental inspection must be completed, signed and filed with the signed inspection hard copy.

**John Deere Foundry Waterloo Operations and Maintenance Plan**  
**Agency Approved Dust Collectors**

<b>JDFW Equipment Number</b>	<b>Title V Emission Point Number</b>	<b>Title V Emission Unit Number</b>	<b>Emission Unit Description</b>
416-11-A1936	248	P-248	ML801 Primary and Secondary Shakeout and Miscellaneous Sand Equipment
416-11-A1971	249		
416-07-A1780	CLRBH #1	P-009A	D850 Primary Blast Cabinet
416-35-A1890	CLRBH #2	P-010	D850 Core Knockout Cabinet
416-35-A1891	CLRBH #3	P-011A	D850 Spotblast Cabinet
416-11-A2051	IFBH	P-3IF	Induction Furnaces (3)
416-06-A2732	IBH1E	P-031	ML802 Casting & Sand Grinding-System I
416-06-A2735	IBH2		
416-06-A2738	IBH3W		
416-06-A2741	IIBH1E	P-034	ML802 Casting & Sand Grinding-System II
416-06-A2744	IIBH2		
416-06-A2747	IIBH3		
416-06-A2750	IIBH4W		
416-06-A2865	IIIBH1S	P-010A	D853 Core Knockout-System III D853 Primary Blast Cabinet
416-06-A2862	IIIBH2	P-017	
416-06-A2859	IIIBH3N		
416-06-A2869	IVBH1S	P-018	D853 Spotblast Cabinet-System IV D863 Reblast Cabinet-System IV D851 Tumbblast Machines-System IV
416-06-A2872	IVBH2S	P-019	
		P-023	

**John Deere Foundry Waterloo**  
**Preventive Maintenance of Environmental Control Equipment**

**General Procedure – Carborundum, BACT and ETA Dust Collectors (Bag-type, pulse clean)**

<u>801 Mold</u>	<u>802 Mold</u>	<u>Melt</u>	<u>Cleaning Room</u>
41611A1936	41606A2732	41611A2051	41606A2859
41611A1971	41606A2735		41606A2862
	41606A2738		41606A2865
	41606A2741		41606A2869
	41606A2744		41606A2872
	41606A2747		
	41606A2750		

**Electronic Monitoring**

Due to the reliability and performance of the 802 mold line collectors, we have not equipped them with stack monitors. These units are very reliable and our preventive maintenance and inspection program has been very successful in maintaining their performance.

The cleaning room units and the ETA units on 801 are equipped with continuous electronic monitoring for stack emissions and collector differential pressure. If either sensor reaches its alarm point, an alarm is sent to CC&M where security notifies maintenance and corrective action is taken (see “Dust Collector Stack Emissions Alarm Procedure”). If the alarm continues, the unit will automatically shut down until the problem is corrected, preventing stack emissions or premature damage to the bags. The Furnace ETA and 801 (Outside) ETA baghouses are compartmentalized. Each compartment is monitored electronically. If a dust leak is detected, the problem compartment is automatically isolated from the system. Inlet and outlet dampers will close, shutting down the problem compartment.

**Routine Maintenance**

Visual observations are made periodically to verify that the air exhausted by the collector is clean to the eye. If there are indications of dirty air, the Stack Emissions Alarm Procedure is put into effect.

Differential pressures are monitored so that changes from the norm can be recognized. Changes in this differential pressure are early indications of collector cleaning problems. Early correction can prevent bag damage. Our collectors may operate within different ranges due to the particulate size and loading. These ranges are specified on the individual collector’s scheduled PM. Typically, these collectors operate within a range of 3”-6”.

The pulse cleaning system is monitored to ensure that there are no air leaks and it is sequencing properly to keep the differential within range. The diaphragm valves are checked by listening for constant airflow through the pulse tubes and by checking to insure that full-regulated line pressure returns after each cycle.

While the unit is in operation, the trades person listens for leaks around the inspection panels and door seals. Work orders are written for potential problems and the repair is scheduled for the off-shift repair crew.

#### Major Preventive Maintenance

Major preventive maintenance is performed monthly, quarterly, semi-annually or annually depending on the severity of the environment and the history of the equipment reliability.

#### Blacklight

Prior to shutting the unit down for this inspection, ½ lb./1000 ft<sup>2</sup> of cloth area of dye is fed into an exhaust duct and ran through the collector. The clean air compartment doors are opened and the area around each bag venturi is inspected with a blacklight for traces of dye residue. If any dye is found, the bag is replaced with a new one. The tube sheets are also inspected for cracks with the blacklight. If cracks are found, the bags around the area of the crack are removed, the crack repaired, and the bags are put back in place.

#### Cleaning and Monitoring

Check to see that the pulse tubes are mounted securely over the bag rows and the individual pulse outlets are not plugged. Check for blown diaphragms in the pulse valves. Check the stack monitors to verify their operation and sensitivity.

#### Structure/Auxiliary Equipment

Inspect the screw conveyors, drive reducers, belts, bearings and sheaves to insure reliable operation. The rotary air locks and drives are inspected to insure good condition and operation. Inspect blower drive belts, sheaves, motor bases and shaft bearings to insure reliable operation. Motor and fan bearing temperatures are monitored through the control panel. The collector shell, duct connections and dust hoppers are inspected for cracks and leaks.



**John Deere Foundry Waterloo**  
**Preventive Maintenance of Environmental Control Equipment**

**General Procedure – BACT and Exijet Dust Collectors (Cartridge-type, non-recirculating)**

Cleaning Room

41607A1780  
41635A1890  
41635A1891

Electronic Monitoring

These three cleaning room units are equipped with continuous electronic monitoring for stack emissions and collector differential pressure. If either sensor reaches its alarm point, an alarm is sent to CC&M where security notifies maintenance and corrective action is taken (see “Dust Collector Stack Emissions Alarm Procedure”). If any collector differential pressure alarm continues, the unit will automatically shut down until the problem is corrected to prevent premature damage to the cartridges.

Routine Maintenance

Visual observations are made periodically to verify that the air exhausted by the collector is clean to the eye. If there are indications of dirty air, the Stack Emissions Alarm Procedure is put into effect.

Differential pressures are monitored so that changes from the norm can be recognized. Changes in this differential pressure are early indications of collector cleaning problems. Early correction can prevent cartridge damage. Our collectors may operate within different ranges due to the particulate size and loading. These ranges are specified on the individual collector’s scheduled PM. Typically, the BACT collector operates within a range of 1”-2.5”. Exijet #2 operates within a range of 1.5”-3” and Exijet #3 operates within a range of 3”-6”.

The pulse cleaning system is monitored to ensure that there are no air leaks and it is sequencing properly to keep the differential within range. The diaphragm valves are checked by listening for constant airflow through the pulse tubes and by checking to insure that full-regulated line pressure returns after each cycle.

While the unit is in operation, the trades person listens for leaks around the inspection panels and door seals. Work orders are written for potential problems and the repair is scheduled for the off-shift repair crew.

Major Preventive Maintenance

Major preventive maintenance is performed monthly, quarterly, semi-annually or annually depending on the severity of the environment and the history of the equipment reliability.

### Blacklight

Prior to shutting the unit down for this inspection, ½ lb./1000 ft<sup>2</sup> of cloth area of dye is fed into an exhaust duct and ran through the collector. The clean air compartment doors are opened and the area around each cartridge venturi is inspected with a blacklight for traces of dye residue. If any dye is found, the cartridge is replaced with a new one. The tube sheets are also inspected for cracks with the blacklight. If cracks are found, the cartridges around the area of the crack are removed, the crack repaired, and the cartridge are put back in place.

### Cleaning and Monitoring

Check to see that the pulse tubes are mounted securely over the cartridge rows and the individual pulse outlets are not plugged. Check for blown diaphragms in the pulse valves. Check the stack monitors to verify their operation and sensitivity.

### Structure/Auxiliary Equipment

Inspect the screw conveyors, drive reducers, belts, bearings and sheaves to insure reliable operation. The rotary air locks and drives are inspected to insure good condition and operation. Inspect blower drive belts, sheaves, motor bases and shaft bearings to insure reliable operation. The collector shell, duct connections and dust hoppers are inspected for cracks and leaks.

# **DUST COLLECTOR STACK EMISSIONS ALARM PROCEDURE**

**IF A COLLECTOR STACK SENSOR HAS GONE INTO ALARM, ATTEMPT TO RESET THE ALARM AND CHECK THE STACK FOR VISIBLE EMISSIONS**

**VISUALLY OBSERVE THE STACK FOR A MINIMUM OF FIVE MINUTES OR THROUGH ONE CLEANING CYCLE**

**IF THERE ARE NO VISIBLE EMISSIONS, AND ALARM RESETS, RESUME OPERATIONS**

**IF THE ALARM WILL NOT RESET OR OCCURS MORE THAN (3) TIMES DURNING AN OPERATING SHIFT, ISSUE A WORK ORDER TO DYE CHECK THE COLLECTOR TO VERIFY THERE ARE NO LEAKING BAGS**

**IF THERE ARE VISIBLE EMISSIONS THAT CANNOT BE STOPPED BY ISOLATION, SHUT**

**THE COLLECTOR DOWN UNTIL NECESSARY  
REPAIRS ARE MADE**

**John Deere Foundry Waterloo**  
**OSHA/Environmental PMs**

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

BM801517

SEQ: 010 EST HRS: 1.0

EQUIPNO: 41611A1936 DEP LOC: 801 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 801 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF:

CATEGORY:09

ETA DUST COLLECTOR INSPECTION \*\*ENVIROMENTAL-SHIELDS\*\*

ETA DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN

801 COLLECTOR 41611A1936

WEEKLY:

FOLLOWUP REQUIRED YES/NO

- CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 4" - 5" \_\_\_\_\_
- CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY \_\_\_\_\_
  - A. LISTEN FOR BLOWN DIAPHRAGMS \_\_\_\_\_
  - B. REGULATED AIR PRESSURE SET AT A MINIMUM OF 65 PSI \_\_\_\_\_

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL \_\_\_\_\_
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS \_\_\_\_\_
- CHECK CONDITION OF ROTARY FEEDERS AND DRIVES \_\_\_\_\_
- CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS \_\_\_\_\_
- CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON CELL PLATE \_\_\_\_\_
- DYECHECK/BLACKLIGHT INSPECTION \_\_\_\_\_
- CHECK CONDITION OF SCREW CONVEYORS, BEARINGS \_\_\_\_\_
- CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES \_\_\_\_\_
- CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS \_\_\_\_\_
- CHECK BLOWER DRIVE BELTS, SHEAVES \_\_\_\_\_
- CHECK MOTOR, BEARINGS AND MOUNT BASE \_\_\_\_\_
- CLN & REPACK DRIVE PILLOW BLOCK BRGS - GREASE 350-13-566-12 \_\_\_\_\_
- CHECK CONDITION AND ADJUSTMENT OF INLET CONE \_\_\_\_\_
- CHECK OPERATION OF AIR DRYER \_\_\_\_\_

\*\*\*ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING SIGNED OFF BY REVIEWER.

COMPLETED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

BT801504

SEQ: 030 EST HRS: 1.0

EQUIPNO: 41611A1936 DEP LOC: 801 FREQ: RM 2 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 801 ACCT CHG: 00046525 LAST SCHED: 20020304 LAST PERF:

CATEGORY:09

801 MAINTENANCE-ETA COLLECTOR \*\*AREA C - KELLER\*\*

801 MAINTENANCE

MONTHLY:

- CHECK AND ADJUST SIDE WALL SCRAPER SO HARD PAN IS NO MORE THAN 1/8" THICK
- CHECK DUST CONVEYOR BELT FOR PROPER ALIGNMENT ADJUST AND CLEAN IF NECESSARY
- CHECK TO MAKE SURE AUTO LUBRICATION SYSTEM IS WORKING AND GREASE IS FULL

COMPLETED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS  
 (SORTED BY PM SCHEDULE NUMBER)  
 BM801501 SEQ: 010 EST HRS: 3.0  
 EQUIPNO: 41611A1971 DEP LOC: 801 FREQ: RM 1A 0 CRAFT: 05 DEPT DOING: 740  
 DEPT CHG: 801 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF:  
 CATEGORY:09  
 \*\*ENVIRONMENTAL GROUP PM FOR MONTHLY INSPECTION\*SHIELDS\*

\*\*\*\*\*  
 \* THIS WORK ORDER GOES TO ENVIRONMENTAL \*  
 \* GROUP!!!!!!!!!!!!!! \*  
 \*\*\*\*\*

# ETA DUST COLLECTOR FOR 801 MOLD LINE

WEEKLY: FOLLOWUP REQUIRED YES/NO

- CHECK DUST COLLECTOR DIFFERENTIAL SHOULD BE 5"-6" MAX. \_\_\_\_\_
- CHECK CLEANING CYCLE IS RUNNING PROPERLY \_\_\_\_\_
- LISTEN FOR BLOWN PURGE VALVES \_\_\_\_\_
- REGULATE AIR PRESSURE, SET AT 65-70 PSI (UNDER ALARM) \_\_\_\_\_

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL \_\_\_\_\_
- CHECK FAN BLOWER MOTOR AND FAN FOR UNUSUAL NOISES OR VIBRATION \_\_\_\_\_
- GREASE SCREW CONVEYOR BEARINGS \_\_\_\_\_
- CHECK LEVEL PROBES IN DUST COLLECTOR HOUSING HOPPERS \_\_\_\_\_
- VISUALLY INSPECT TUBE SHEET FOR CRACKS, RUST, OR LEAKAGE \_\_\_\_\_
- VISUAL CHECK FOR DUST LEAKS IN COLLECTOR HOUSINGS \_\_\_\_\_
- VISUAL CHECK FOR LEAKING COMPARTMENT DOOR SEALS \_\_\_\_\_
- VISUAL CHECK OF ROTARY VALVES AND DRIVES ON SCREW CONVEYORS \_\_\_\_\_
- VISUAL CHECK OF CONDITION SCREW CONV. AND HANGER BEARINGS, REPLACE IF NECESSARY \_\_\_\_\_
- VISUAL CHECK CONDITION OF BUCKET ELEVATOR BEARINGS LOWER AND UPPER. CHECK BELT TENSION OF REDUCER. TIGHTEN DRIVE BELTS PER MANUAL AND GREASE TOP BEARINGS ACCORDING TO SCHEDULE. \_\_\_\_\_
- VISUAL CK CONDITION OF PULSE BLOW PIPES TO CLEAN FILTER BAGS. CK POSITION ABOVE BAG CONNECTION ON MANIFOLD, ETC. \_\_\_\_\_
- VISUAL CHECK FOR EVIDENCE OF LEAKING BAGS, TUBE SHEET CRACKS OR LEAKS OF ANY ACCUMULATION OF DUST ON CELL PLATE. \_\_\_\_\_
- DYE/CHECK/BLACKLIGHT INSPECTION IF ALARM CONDITION PRESENT OR EVIDENCE OF DUST ON TUBE SHEET \_\_\_\_\_
- VISUAL CHECK OF CONDITION OF INLET AND DAMPER FOR SEALING WHEN CLOSED, ADJUST ACTUATOR AS NECESSARY. SEE MANUAL. \_\_\_\_\_
- CHECK CONDITION OF BLOWER, VIBRATION AND TEMPERATURES OF BEARINGS. \_\_\_\_\_

COMPLETE THE FOLLOWING IN JANUARY AND JUNE:

- CLEAN AND REPACK FAN BEARINGS AS REQ'D, GREASE #350-13-566-12  
PACK BRGS ONLY TO BOTTOM OF FAN SHAFT. \_\_\_\_\_

COMPLETED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS  
 (SORTED BY PM SCHEDULE NUMBER)  
 HH850500 SEQ: 010 EST HRS: 1.0  
 EQUIPNO: 41607A1780 DEP LOC: 850 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740  
 DEPT CHG: 850 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950707  
 CATEGORY:09  
 #1 BACT COLLECTOR INSPECTION

BACT DUST COLLECTOR CARTRIDGE TYPE NON RECIRCULATE PULSE CLEAN  
 #1 BACT DUST COLLECTOR CLEANING ROOM 41607A1780

WEEKLY:	FOLLOWUP REQUIRED YES/NO
▪ CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 1.5" - 2.5"	_____
▪ CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY	_____
A. LISTEN FOR BLOWN DIAPHRAGMS	_____
B. REGULATED AIR PRESSURE SET TO A MINIMUM OF 90 PSI	_____

SEMI ANNUAL (MONTH OF JAN AND JUN):	
▪ CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL	_____
▪ CHECK FOR LEAKING COMPARTMENT DOOR SEALS	_____
▪ CHECK FOR WORN OR DAMAGED CARTRIDGES, EVIDENCE OF LEAKS, DUST ACCUMULATING ON CLEAN AIR SIDE	_____
▪ CHECK CONDITION OF ROTARY FEEDERS AND DRIVES	_____
▪ CHECK CONDITION OF BLOW PIPES FOR CLEANING CARTRIDGES	_____
▪ DYE/CHECK/BLACKLIGHT INSPECTION	_____
▪ CHECK CONDITION OF SCREW CONVEYORS, BEARINGS	_____
▪ CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES	_____
▪ CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS	_____
▪ CHECK BLOWER DRIVE BELTS, SHEAVES	_____
▪ CHECK MOTOR, BEARINGS AND MOUNT BASE	_____
▪ CLN & REPACK DRIVE PILLOW BLOCK BRGS - GREASE 350-13-566-12	_____
▪ CHECK CONDITION AND ADJUSTMENT OF INLET CONE	_____

\*\*\*ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING  
 SIGNED OFF BY REVIEWER.

COMPLETED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_



RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

HH850501

SEQ: 020 EST HRS: 1.0

EQUIPNO: 41635A1890 DEP LOC: 850 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 850 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950522

CATEGORY:09

#2 EXIJET COLLECTOR INSPECTION

EXIJET DUST COLLECTOR CARTRIDGE TYPE NONRECIRCULATE PULSE CLEAN

#2 EXIJET DUST COLLECTOR CLEANING ROOM 41635A1890

WEEKLY:

FOLLOWUP REQUIRED YES/NO

- CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 1.5" - 3" \_\_\_\_\_
- CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY \_\_\_\_\_
  - A. LISTEN FOR BLOWN DIAPHRAGMS \_\_\_\_\_
  - B. GENERATED AIR PRESSURE TO BE SET AT A MINIMUM OF 90 PSI \_\_\_\_\_

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL \_\_\_\_\_
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS \_\_\_\_\_
- CHECK FOR WORN OR DAMAGED CARTRIDGES, EVIDENCE OF LEAKS, DUST  
ACCUMULATING ON CLEAN AIR SIDE \_\_\_\_\_
- CHECK CONDITION OF ROTARY FEEDERS AND DRIVES \_\_\_\_\_
- CHECK CONDITION OF BLOW PIPES FOR CLEANING CARTRIDGES \_\_\_\_\_
- DYECHECK/BLACKLIGHT INSPECTION \_\_\_\_\_
- CHECK CONDITION OF SCREW CONVEYORS, BEARINGS \_\_\_\_\_
- CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES \_\_\_\_\_
- CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS \_\_\_\_\_
- CHECK BLOWER DRIVE BELTS, SHEAVES \_\_\_\_\_
- CHECK MOTOR, BEARINGS AND MOUNT BASE \_\_\_\_\_
- CLN & REPACK DRIVE PILLOW BLOCK BRGS - GREASE 350-13-566-12 \_\_\_\_\_
- CHECK CONDITION AND ADJUSTMENT OF INLET CONE \_\_\_\_\_

\*\*\*ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING  
SIGNED OFF BY REVIEWER.

COMPLETED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS  
 (SORTED BY PM SCHEDULE NUMBER)  
 HH850502 SEQ: 010 EST HRS: 1.0  
 EQUIPNO: 41635A1891 DEP LOC: 850 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740  
 DEPT CHG: 850 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950522  
 CATEGORY:09  
 #3 EXIJET COLLECTOR INSPECTION

EXIJET DUST COLLECTOR CARTRIDGE TYPE NONRECIRCULATE PULSE CLEAN  
 #3 EXIJET DUST COLLECTOR CLEANING ROOM 41635A1891

WEEKLY: FOLLOWUP REQUIRED YES/NO

- CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 3" - 6" \_\_\_\_\_
- CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY \_\_\_\_\_
- A. LISTEN FOR BLOWN DIAPHRAGMS \_\_\_\_\_
- B. GENERATED AIR PRESSURE TO BE SET AT A MINIMUM OF 90 PSI \_\_\_\_\_

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL \_\_\_\_\_
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS \_\_\_\_\_
- CHECK FOR WORN OR DAMAGED CARTRIDGES, EVIDENCE OF LEAKS, DUST  
ACCUMULATING ON CLEAN AIR SIDE \_\_\_\_\_
- CHECK CONDITION OF ROTARY FEEDERS AND DRIVES \_\_\_\_\_
- CHECK CONDITION OF BLOW PIPES FOR CLEANING CARTRIDGES \_\_\_\_\_
- DYECHECK/BLACKLIGHT INSPECTION \_\_\_\_\_
- CHECK CONDITION OF SCREW CONVEYORS, BEARINGS \_\_\_\_\_
- CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES \_\_\_\_\_
- CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS \_\_\_\_\_
- CHECK BLOWER DRIVE BELTS, SHEAVES \_\_\_\_\_
- CHECK MOTOR, BEARINGS AND MOUNT BASE \_\_\_\_\_
- CLN & REPACK DRIVE PILLOW BLOCK BRGS - GREASE 350-13-566-12 \_\_\_\_\_
- CHECK CONDITION AND ADJUSTMENT OF INLET CONE \_\_\_\_\_

\*\*\*ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING  
 SIGNED OFF BY REVIEWER.

COMPLETED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

AM830501

SEQ: 010 EST HRS: 2.0

EQUIPNO: 41611A2051 DEP LOC: 830 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 830 ACCT CHG: 00046025 LAST SCHED: LAST PERF:

CATEGORY:09

ETA DUST COLLECTOR MELT FURNACE WEEKLY INSP \*\*TOMPKINS\*\*

ETA DUST COLLECTOR - 200,000 ACFM

DAILY:

FOLLOWUP REQUIRED YES/NO

MIXER PELLETIZER:

- CHECK QUALITY OF DUST LEAVING MIXER, SHOULD BE NON-DUSTING IN CONSISTENCY. \_\_\_\_\_
- CHECK LEVEL OF DUST IN SILO, DUST MIXER & DUST TOTE FOR PROPER OPERATION \_\_\_\_\_

DUST COLLECTOR SYSTEM:

- CHECK DUST COLLECTOR DIFF PRESSURE, SHOULD BE 4" - 6" MAX \_\_\_\_\_

WEEKLY:

FOLLOWUP REQUIRED YES/NO

MIXER PELLETIZER:

- CHECK & ADJUST SIDE-WALL SCRAPER SO HARDPAN IS NO MORE THAN 1/8" THICK. \_\_\_\_\_
- CHECK AIR LINE LUBRICATORS IN MIXER ROOM FOR OIL, FILL IF NECESSARY. \_\_\_\_\_
- CHECK DUST CONVEYOR BELT FOR PROPER ALIGNMENT, ADJUST & CLEAN IF NECESSARY. \_\_\_\_\_
- CHECK AUTO LUBRICATION ON MIXER PELLETIZER-USE LOW TEMP LUBE #350-13-566-10, 35LB PAIL. MANUALLY CHECK FOR GREASING. \_\_\_\_\_
- GREASE FAN BEARINGS WITH SHC-32 350-13-565-33 (2 PUMPS). \_\_\_\_\_

HANKISON AIR DRYER:

- CHECK DEW POINT MOISTURE INDICATOR, SHOULD BE GREEN. \_\_\_\_\_
- CHECK INDICATING LIGHTS ARE ILLUMINATED. \_\_\_\_\_
- CHECK TOWER PRESSURE READING. OFF-LINE TOWER SHOULD READ 2 PSIG OR LESS. IF PRESSURE EXCEEDS 2-3 PSI, REPLACE MUFFLER ELEMENTS. \_\_\_\_\_
- CHECK FOR ALARM CONDITIONS. \_\_\_\_\_
- CHECK FOR OIL OR HIGH MOISTURE PRESENCE AFTER DRYER. \_\_\_\_\_

DUST COLLECTOR:

- CHECK DUST COLLECTOR DIFFERENTIAL PRESSURE, SHOULD BE 4"-6" MAX. \_\_\_\_\_
- CHECK CLEANING CYCLE IS RUNNING PROPERLY. CHECK OPERATIONAL MANUALS FOR SEQUENCE OF OPERATION. \_\_\_\_\_
- LISTEN FOR BLOWN PURGE VALVES. \_\_\_\_\_
- REGULATE AIR PRESSURE, SET AT 65-70 PSIG. \_\_\_\_\_

COMPLETED BY \_\_\_\_\_ DATE \_\_\_\_\_ APPROVED \_\_\_\_\_

DATE INSPECTED \_\_\_\_\_ INSPECTED BY \_\_\_\_\_ PASS \_\_\_ FAIL \_\_\_

ADDITIONAL WORK REQUIRED: \_\_\_\_\_

REVIEWED BY \_\_\_\_\_

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS  
 (SORTED BY PM SCHEDULE NUMBER)  
 AM830502 SEQ: 010 EST HRS: 3.0  
 EQUIPNO: 41611A2051 DEP LOC: 830 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740  
 DEPT CHG: 830 ACCT CHG: 00046025 LAST SCHED: LAST PERF:  
 CATEGORY:09  
 ETA DUST COLLECTOR MELT FURNACE MONTHLY INSP \*\*TOMPKINS\*\*

ETA DUST COLLECTOR - 200,000 ACFM

MONTHLY: FOLLOWUP REQUIRED YES/NO  
 DUST COLLECTOR, SCREW CONVEYORS, SILO DUST COLLECTOR, ELEVATOR:

- CHECK LEVEL PROBES IN DUST COLLECTOR HOUSING HOPPERS \_\_\_\_\_
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS \_\_\_\_\_
- CHECK CONDITION OF ROTARY VALVES & DRIVES ON SCREW CONVEYORS \_\_\_\_\_
- CHECK CONDITION OF SCREW CONVEYORS & HANGER BEARINGS, REPLACE AS NECESSARY \_\_\_\_\_
- CHECK CONDITION OF BUCKET ELEVATOR BEARINGS LOWER & UPPER, CHECK BELT TENSION OF REDUCER. TIGHTEN DRIVE BELTS PER MANUAL & GREASE TOP BEARINGS ACCORDING TO SCHEDULE. \_\_\_\_\_
- CHECK CONDITION OF PULSE BLOW PIPES USED TO CLEAN FILTER BAGS, CHECK CONNECTION TO BLOW PIPE MOUNTED ON MANIFOLD \_\_\_\_\_
- CHECK CONDITION OF INLET & DAMPER FOR SEALING WHEN CLOSED, ADJUST ACTUATOR AS NECESSARY - SEE MANUAL \_\_\_\_\_
- CHECK CONDITION OF BLOWER, VIBRATION & TEMPERATURE OF BEARINGS. \_\_\_\_\_
- REPACK FAN BEARINGS, AS REQ'D, USE MOBIL TEMP SHC-32, SEMI-ANNUAL FOR REPACKING FAN BEARINGS (JAN AND JUN) STOCK # 350-13-565-33, PACK BEARINGS ½" BELOW BOTTOM OF FAN SHAFT. \_\_\_\_\_

MIXER PELLETIZER - LANCASTER:

- CHECK TURBO MIXER BLADES & WALL SCRAPER BLADES, REPLACE AS NECESSARY \_\_\_\_\_
- CHECK FOR LEAKING SEALS IN ACCESS DOOR \_\_\_\_\_
- CHECK EXHAUST DUCTWORK CONNECTED TO MIXER FOR PLUGGING, CLEAN AS NECESSARY \_\_\_\_\_
- CHECK & CLEAN MIXER DISCHARGE DOOR & RAILS \_\_\_\_\_

\*\*\*ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING  
 SIGNED OFF BY REVIEWER.

COMPLETED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

CM802510

SEQ: 010 EST HRS: 1.0

EQUIPNO: 41606A2732 DEP LOC: 802 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 802 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF:

CATEGORY:09

INSPECTION-#1 DUST COLLECTOR SYSTEM\*\*SHEILDS

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN

802 # 1 COLLECTOR 41606A2732

WEEKLY:

FOLLOWUP REQUIRED YES/NO

- CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6" \_\_\_\_\_
- CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY \_\_\_\_\_
  - A. LISTEN FOR BLOWN DIAPHRAGMS \_\_\_\_\_
  - B. REGULATED AIR PRESSURE SET AT A MINIMUM OF 90 PSI \_\_\_\_\_

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL \_\_\_\_\_
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS \_\_\_\_\_
- CHECK CONDITION OF ROTARY FEEDERS AND DRIVES \_\_\_\_\_
- CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS \_\_\_\_\_
- CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON CELL PLATE \_\_\_\_\_
- DYECHECK/BLACKLIGHT INSPECTION \_\_\_\_\_
- CHECK CONDITION OF SCREW CONVEYORS, BEARINGS \_\_\_\_\_
- CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES \_\_\_\_\_
- CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS \_\_\_\_\_
- CHECK BLOWER DRIVE BELTS, SHEAVES \_\_\_\_\_
- CHECK MOTOR, BEARINGS AND MOUNT BASE \_\_\_\_\_
- CLN & REPACK DRIVE PILLOW BLOCK BRGS - GREASE 350-13-566-12 \_\_\_\_\_
- CHECK CONDITION AND ADJUSTMENT OF INLET CONE \_\_\_\_\_

\*\*\*ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING SIGNED OFF BY REVIEWER.

COMPLETED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

CM802511

SEQ: 010 EST HRS: 1.0

EQUIPNO: 41606A2735 DEP LOC: 802 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 802 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950612

CATEGORY:09

INSP #1 DUST COLLECTOR SYS-#2 DUST COLLECTOR SHIELDS

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN

802 # 2 COLLECTOR 41606A2735

WEEKLY:

FOLLOWUP REQUIRED YES/NO

▪ CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6" \_\_\_\_\_

▪ CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY \_\_\_\_\_

A. LISTEN FOR BLOWN DIAPHRAGMS \_\_\_\_\_

B. REGULATED AIR PRESSURE SET AT A MINIMUM OF 90 PSI \_\_\_\_\_

SEMI ANNUAL (MONTH OF JAN AND JUN):

▪ CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL \_\_\_\_\_

▪ CHECK FOR LEAKING COMPARTMENT DOOR SEALS \_\_\_\_\_

▪ CHECK CONDITION OF ROTARY FEEDERS AND DRIVES \_\_\_\_\_

▪ CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS \_\_\_\_\_

▪ CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON  
CELL PLATE \_\_\_\_\_

▪ DYE/CHECK/BLACKLIGHT INSPECTION \_\_\_\_\_

▪ CHECK CONDITION OF SCREW CONVEYORS, BEARINGS \_\_\_\_\_

▪ CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES \_\_\_\_\_

▪ CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS \_\_\_\_\_

▪ CHECK BLOWER DRIVE BELTS, SHEAVES \_\_\_\_\_

▪ CHECK MOTOR, BEARINGS AND MOUNT BASE \_\_\_\_\_

▪ CLN & REPACK DRIVE PILLOW BLOCK BRGS - GREASE 350-13-566-12 \_\_\_\_\_

▪ CHECK CONDITION AND ADJUSTMENT OF INLET CONE \_\_\_\_\_

\*\*\*ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING  
SIGNED OFF BY REVIEWER

COMPLETED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

CM802512

SEQ: 010 EST HRS: 1.0

EQUIPNO: 41606A2738 DEP LOC: 802 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 802 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950612

CATEGORY:09

INSP #1 DUST COLLECTOR SYS-#3 DUST COLLECTOR SHIELDS

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN

802 # 3 COLLECTOR 41606A2738

WEEKLY:

FOLLOWUP REQUIRED YES/NO

- CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6" \_\_\_\_\_
- CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY \_\_\_\_\_
  - A. LISTEN FOR BLOWN DIAPHRAGMS \_\_\_\_\_
  - B. REGULATED AIR PRESSURE SET TO A MINIMUM OF 90 PSI \_\_\_\_\_

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL \_\_\_\_\_
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS \_\_\_\_\_
- CHECK CONDITION OF ROTARY FEEDERS AND DRIVES \_\_\_\_\_
- CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS \_\_\_\_\_
- CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON CELL PLATE \_\_\_\_\_
- DYECHECK/BLACKLIGHT INSPECTION \_\_\_\_\_
- CHECK CONDITION OF SCREW CONVEYORS, BEARINGS \_\_\_\_\_
- CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES \_\_\_\_\_
- CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS \_\_\_\_\_
- CHECK BLOWER DRIVE BELTS, SHEAVES \_\_\_\_\_
- CHECK MOTOR, BEARINGS AND MOUNT BASE \_\_\_\_\_
- CLN & REPACK DRIVE PILLOW BLOCK BRGS - GREASE 350-13-566-12 \_\_\_\_\_
- CHECK CONDITION AND ADJUSTMENT OF INLET CONE \_\_\_\_\_

\*\*\*ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO  
BEING SIGNED OFF BY REVIEWER.

COMPLETED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS  
 (SORTED BY PM SCHEDULE NUMBER)  
 CM802513 SEQ: 010 EST HRS: 1.0  
 EQUIPNO: 41606A2741 DEP LOC: 802 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740  
 DEPT CHG: 802 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950612  
 CATEGORY:09  
 INSP #2 DUST COLLECTOR SYS-#4 DUST COLLECTOR SHIELDS

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN  
 802 # 4 COLLECTOR 41606A2741

WEEKLY:	FOLLOWUP REQUIRED YES/NO
▪ CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6"	_____
▪ CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY	_____
A. LISTEN FOR BLOWN DIAPHRAGMS	_____
B. REGULATED AIR PRESSURE SET TO A MINIMUM OF 90 PSI	_____

SEMI ANNUAL (MONTH OF JAN AND JUN):	
▪ CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL	_____
▪ CHECK FOR LEAKING COMPARTMENT DOOR SEALS	_____
▪ CHECK CONDITION OF ROTARY FEEDERS AND DRIVES	_____
▪ CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS	_____
▪ CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON CELL PLATE	_____
▪ DYE/CHECK/BLACKLIGHT INSPECTION	_____
▪ CHECK CONDITION OF SCREW CONVEYORS, BEARINGS	_____
▪ CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES	_____
▪ CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS	_____
▪ CHECK BLOWER DRIVE BELTS, SHEAVES	_____
▪ CHECK MOTOR, BEARINGS AND MOUNT BASE	_____
▪ CLN & REPACK DRIVE PILLOW BLOCK BRGS - GREASE 350-13-566-12	_____
▪ CHECK CONDITION AND ADJUSTMENT OF INLET CONE	_____

\*\*\*ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING  
 SIGNED OF BY REVIEWER.

COMPLETED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_



RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

CM802515

SEQ: 010 EST HRS: 1.0

EQUIPNO: 41606A2744 DEP LOC: 802 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 802 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950612

CATEGORY:09

INSP #2 DUST COLLECTOR SYS-#5 DUST COLLECTOR SHIELDS

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN

802 # 5 COLLECTOR 41606A2744

WEEKLY:

FOLLOWUP REQUIRED YES/NO

- CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6" \_\_\_\_\_
- CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY \_\_\_\_\_
  - A. LISTEN FOR BLOWN DIAPHRAGMS \_\_\_\_\_
  - B. REGULATED AIR PRESSURE SET AT A MINIMUM OF 90 PSI \_\_\_\_\_

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL \_\_\_\_\_
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS \_\_\_\_\_
- CHECK CONDITION OF ROTARY FEEDERS AND DRIVES \_\_\_\_\_
- CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS \_\_\_\_\_
- CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON CELL PLATE \_\_\_\_\_
- DYECHECK/BLACKLIGHT INSPECTION \_\_\_\_\_
- CHECK CONDITION OF SCREW CONVEYORS, BEARINGS \_\_\_\_\_
- CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES \_\_\_\_\_
- CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS \_\_\_\_\_
- CHECK BLOWER DRIVE BELTS, SHEAVES \_\_\_\_\_
- CHECK MOTOR, BEARINGS AND MOUNT BASE \_\_\_\_\_
- CLN & REPACK DRIVE PILLOW BLOCK BRGS - GREASE 350-13-566-12 \_\_\_\_\_
- CHECK CONDITION AND ADJUSTMENT OF INLET CONE \_\_\_\_\_

\*\*ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING SIGNED OFF BY REVIEWER.

COMPLETED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS  
 (SORTED BY PM SCHEDULE NUMBER)  
 CM802504 SEQ: 010 EST HRS: 1.0  
 EQUIPNO: 41606A2747 DEP LOC: 802 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740  
 DEPT CHG: 802 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19971118  
 CATEGORY:09  
 INSP #2 DUST COLLECTOR SYS-#6 DUST COLLECTOR SHIELDS

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN  
 802 # 6 COLLECTOR 41606A2747

WEEKLY: FOLLOWUP REQUIRED YES/NO

- CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6" \_\_\_\_\_
- CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY \_\_\_\_\_
- A. LISTEN FOR BLOWN DIAPHRAGMS \_\_\_\_\_
- B. REGULATED AIR PRESSURE SET TO A MINIMUM OF 90 PSI \_\_\_\_\_

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL \_\_\_\_\_
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS \_\_\_\_\_
- CHECK CONDITION OF ROTARY FEEDERS AND DRIVES \_\_\_\_\_
- CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS \_\_\_\_\_
- CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON  
CELL PLATE \_\_\_\_\_
- DYE/CHECK/BLACKLIGHT INSPECTION \_\_\_\_\_
- CHECK CONDITION OF SCREW CONVEYORS, BEARINGS \_\_\_\_\_
- CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES \_\_\_\_\_
- CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS \_\_\_\_\_
- CHECK BLOWER DRIVE BELTS, SHEAVES \_\_\_\_\_
- CHECK MOTOR, BEARINGS AND MOUNT BASE \_\_\_\_\_
- CLN & REPACK DRIVE PILLOW BLOCK BRGS - GREASE 350-13-566-12 \_\_\_\_\_
- CHECK CONDITION AND ADJUSTMENT OF INLET CONE \_\_\_\_\_

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 BEING SIGNED OFF BY REVIEWER.

COMPLETED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS

(SORTED BY PM SCHEDULE NUMBER)

CM802501

SEQ: 010 EST HRS: 1.0

EQUIPNO: 41606A2750 DEP LOC: 802 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740

DEPT CHG: 802 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF:

CATEGORY:09

INSP #2 DUST COLLECTOR SYS-#7 DUST COLLECTOR SHIELDS

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN

802 # 7 COLLECTOR 41606A2750

WEEKLY:

FOLLOWUP REQUIRED YES/NO

- CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6" \_\_\_\_\_
- CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY \_\_\_\_\_
- A. LISTEN FOR BLOWN DIAPHRAGMS \_\_\_\_\_
- B. REGULATED AIR PRESSURE SET AT A MINIMUM OF 90 PSI \_\_\_\_\_

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL \_\_\_\_\_
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS \_\_\_\_\_
- CHECK CONDITION OF ROTARY FEEDERS AND DRIVES \_\_\_\_\_
- CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS \_\_\_\_\_
- CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON \_\_\_\_\_
- CELL PLATE \_\_\_\_\_
- DYE/CHECK/BLACKLIGHT INSPECTION \_\_\_\_\_
- CHECK CONDITION OF SCREW CONVEYORS, BEARINGS \_\_\_\_\_
- CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES \_\_\_\_\_
- CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS \_\_\_\_\_
- CHECK BLOWER DRIVE BELTS, SHEAVES \_\_\_\_\_
- CHECK MOTOR, BEARINGS AND MOUNT BASE \_\_\_\_\_
- CLN & REPACK DRIVE PILLOW BLOCK BRGS - GREASE 350-13-566-12 \_\_\_\_\_
- CHECK CONDITION AND ADJUSTMENT OF INLET CONE \_\_\_\_\_

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SIGNED OFF BY REVIEWER.

COMPLETED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS  
 (SORTED BY PM SCHEDULE NUMBER)  
 HH853500 SEQ: 010 EST HRS: 1.0  
 EQUIPNO: 41606A2865 DEP LOC: 853 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740  
 DEPT CHG: 851 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950707  
 CATEGORY:09  
 #10 DUST COLLECTOR INSPECTION

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN  
 #10 DUST COLLECTOR CLEANING ROOM 41606A2865

WEEKLY: FOLLOWUP REQUIRED YES/NO

- CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6" \_\_\_\_\_
- CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY \_\_\_\_\_
- A. LISTEN FOR BLOWN DIAPHRAGMS \_\_\_\_\_
- B. REGULATED AIR PRESSURE SET TO A MINIMUM OF 90 PSI \_\_\_\_\_

SEMI ANNUAL (MONTH OF JAN AND JUN):

- CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL \_\_\_\_\_
- CHECK FOR LEAKING COMPARTMENT DOOR SEALS \_\_\_\_\_
- CHECK CONDITION OF ROTARY FEEDERS AND DRIVES \_\_\_\_\_
- CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS \_\_\_\_\_
- CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON  
CELL PLATE \_\_\_\_\_
- DYECHECK/BLACKLIGHT INSPECTION \_\_\_\_\_
- CHECK CONDITION OF SCREW CONVEYORS, BEARINGS \_\_\_\_\_
- CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES \_\_\_\_\_
- CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS \_\_\_\_\_
- CHECK BLOWER DRIVE BELTS, SHEAVES \_\_\_\_\_
- CHECK MOTOR, BEARINGS AND MOUNT BASE \_\_\_\_\_
- CLN & REPACK DRIVE PILLOW BLOCK BRGS - 350-13-566-12 \_\_\_\_\_
- CHECK CONDITION AND ADJUSTMENT OF INLET CONE \_\_\_\_\_

\*\*ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING  
 SIGNED OFF BY REVIEWER.

COMPLETED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS  
 (SORTED BY PM SCHEDULE NUMBER)  
 HH853501 SEQ: 010 EST HRS: 1.0  
 EQUIPNO: 41606A2862 DEP LOC: 853 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740  
 DEPT CHG: 853 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950707  
 CATEGORY:09  
 # 11 DUST COLLECTOR INSPECTION

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN  
 #11 DUST COLLECTOR CLEANING ROOM 41606A2862

WEEKLY:	FOLLOWUP REQUIRED YES/NO
▪ CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6"	_____
▪ CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY	_____
A. LISTEN FOR BLOWN DIAPHRAGMS	_____
B. REGULATED AIR PRESSURE SET AT A MINIMUM OF 90 PSI	_____

SEMI ANNUAL (MONTH OF JAN AND JUN):	
▪ CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL	_____
▪ CHECK FOR LEAKING COMPARTMENT DOOR SEALS	_____
▪ CHECK CONDITION OF ROTARY FEEDERS AND DRIVES	_____
▪ CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS	_____
▪ CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON CELL PLATE	_____
▪ DYE/CHECK/BLACKLIGHT INSPECTION	_____
▪ CHECK CONDITION OF SCREW CONVEYORS, BEARINGS	_____
▪ CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES	_____
▪ CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS	_____
▪ CHECK BLOWER DRIVE BELTS, SHEAVES	_____
▪ CHECK MOTOR, BEARINGS AND MOUNT BASE	_____
▪ CLN & REPACK DRIVE PILLOW BLOCK BRGS - 350-13-566-12	_____
▪ CHECK CONDITION AND ADJUSTMENT OF INLET CONE	_____

\*\*\*ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING SIGNED OFF BY REVIEWER.

COMPLETED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS  
 (SORTED BY PM SCHEDULE NUMBER)  
 HH853502 SEQ: 010 EST HRS: 1.0  
 EQUIPNO: 41606A2859 DEP LOC: 853 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740  
 DEPT CHG: 853 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950610  
 CATEGORY:09  
 #12 DUST COLLECTOR INSPECTION

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN  
 #12 DUST COLLECTOR CLEANING ROOM 41606A2859

WEEKLY:	FOLLOWUP REQUIRED YES/NO
▪ CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6"	_____
▪ CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY	_____
A. LISTEN FOR BLOWN DIAPHRAGMS	_____
B. REGULATED AIR PRESSURE SET TO A MINIMUM OF 90 PSI	_____

SEMI ANNUAL (MONTH OF JAN AND JUN):	
▪ CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL	_____
▪ CHECK FOR LEAKING COMPARTMENT DOOR SEALS	_____
▪ CHECK CONDITION OF ROTARY FEEDERS AND DRIVES	_____
▪ CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS	_____
▪ CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON CELL PLATE	_____
▪ DYE/CHECK/BLACKLIGHT INSPECTION	_____
▪ CHECK CONDITION OF SCREW CONVEYORS, BEARINGS	_____
▪ CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES	_____
▪ CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS	_____
▪ CHECK BLOWER DRIVE BELTS, SHEAVES	_____
▪ CHECK MOTOR, BEARINGS AND MOUNT BASE	_____
▪ CLN & REPACK DRIVE PILLOW BLOCK BRGS - 350-13-566-12	_____
▪ CHECK CONDITION AND ADJUSTMENT OF INLET CONE	_____

\*\*\*ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING SIGNED OFF BY REVIEWER.

COMPLETED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS  
 (SORTED BY PM SCHEDULE NUMBER)  
 HH851500 SEQ: 010 EST HRS: 4.0  
 EQUIPNO: 41606A2869 DEP LOC: 851 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740  
 DEPT CHG: 851 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950610  
 CATEGORY:09  
 #8 DUST COLLECTOR INSPECTION

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN  
 #8 DUST COLLECTOR CLEANING ROOM 41606A2869

WEEKLY:	FOLLOWUP REQUIRED YES/NO
▪ CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6"	_____
▪ CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY	_____
A. LISTEN FOR BLOWN DIAPHRAGMS	_____
B. REGULATED AIR PRESSURE SET TO A MINIMUM OF 90 PSI	_____

SEMI ANNUAL (MONTH OF JAN AND JUN):	
▪ CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL	_____
▪ CHECK FOR LEAKING COMPARTMENT DOOR SEALS	_____
▪ CHECK CONDITION OF ROTARY FEEDERS AND DRIVES	_____
▪ CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS	_____
▪ CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON CELL PLATE	_____
▪ DYE/CHECK/BLACKLIGHT INSPECTION	_____
▪ CHECK CONDITION OF SCREW CONVEYORS, BEARINGS	_____
▪ CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES	_____
▪ CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS	_____
▪ CHECK BLOWER DRIVE BELTS, SHEAVES	_____
▪ CHECK MOTOR, BEARINGS AND MOUNT BASE	_____
▪ CLN & REPACK DRIVE PILLOW BLOCK BRGS - 350-13-566-12	_____
▪ CHECK CONDITION AND ADJUSTMENT OF INLET CONE	_____

\*\*\*ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING SIGNED OFF REVIEWER.

COMPLETED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_

RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS  
 (SORTED BY PM SCHEDULE NUMBER)  
 HH851501 SEQ: 010 EST HRS: 1.0  
 EQUIPNO: 41606A2872 DEP LOC: 851 FREQ: RM 1 0 CRAFT: 05 DEPT DOING: 740  
 DEPT CHG: 851 ACCT CHG: 00046525 LAST SCHED: 20020225 LAST PERF: 19950522  
 CATEGORY:09  
 #9 DUST COLLECTOR INSPECTION

CARBORUNDUM DUST COLLECTOR TUBE TYPE NONRECIRCULATE PULSE CLEAN  
 #9 DUST COLLECTOR CLEANING ROOM 41606A2872

WEEKLY:	FOLLOWUP REQUIRED YES/NO
▪ CHECK DIFFERENTIAL PRESSURES OPERATING RANGE OF 2" - 6"	_____
▪ CHECK THAT THE CLEANING CYCLE IS WORKING PROPERLY	_____
A. LISTEN FOR BLOWN DIAPHRAGMS	_____
B. REGULATED AIR PRESSURE SET TO A MINIMUM OF 90 PSI	_____

SEMI ANNUAL (MONTH OF JAN AND JUN):

▪ CHECK FOR DUST LEAKS IN COLLECTOR (HOUSE) IN GENERAL	_____
▪ CHECK FOR LEAKING COMPARTMENT DOOR SEALS	_____
▪ CHECK CONDITION OF ROTARY FEEDERS AND DRIVES	_____
▪ CHECK CONDITION OF BLOW PIPES FOR CLEANING TUBES/BAGS	_____
▪ CHECK FOR EVIDENCE OF LEAKING BAGS, ACCUMULATION OF DIRT ON CELL PLATE	_____
▪ DYE/CHECK/BLACKLIGHT INSPECTION	_____
▪ CHECK CONDITION OF SCREW CONVEYORS, BEARINGS	_____
▪ CHECK CONDITION OF SCREW DRIVE REDUCERS, BELTS, SHEAVES	_____
▪ CHECK CONDITION OF BLOWER LINE SHAFT BEARINGS	_____
▪ CHECK BLOWER DRIVE BELTS, SHEAVES	_____
▪ CHECK MOTOR, BEARINGS AND MOUNT BASE	_____
▪ CLN & REPACK DRIVE PILLOW BLOCK BRGS - 350-13-566-12	_____
▪ CHECK CONDITION AND ADJUSTMENT OF INLET CONE	_____

\*\*ALL LINES BELOW MUST BE FILLED IN COMPLETELY PRIOR TO BEING SIGNED  
 OFF BY REVIEWER.

COMPLETED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ APPROVED BY: \_\_\_\_\_



RFWO080D-2 J.D.FOUNDRY WATERLOO OSHA PMS  
 (SORTED BY PM SCHEDULE NUMBER)  
 SM712500 SEQ: 010 EST HRS: 2.0  
 EQUIPNO: 049012 DEP LOC: 710 FREQ: RW 0 CRAFT: 17 DEPT DOING: 741  
 DEPT CHG: 712 ACCT CHG: 00046531 LAST SCHED: 20020318 LAST PERF: 19950707  
 CATEGORY:09  
 VISUAL INSPECTION ON ROOF - DUST COLLECTOR ROUTE - \*\* HVAC \*\*

WEEKLY COMPLETE A VISUAL CHECK OF ALL STACKS FOR THE FOLLOWING:

\*\*REPORT DAILY ANY PROBLEMS TO MAINTENANCE VERBALLY AND IN WRITTEN WORK ORDER FORM

THIS REPORT INCLUDES OBSERVATIONS MADE ON THE FOLLOWING DATE(S):	MON	TUE	WED	THU	FRI	SAT	SUN
	_____	_____	_____	_____	_____	_____	_____

MOLD UNIT 801			VISIBLE EMISSIONS OBSERVED YES/NO						
DESCRIPTION	BRASS TAG	STACK #	MON	TUE	WED	THU	FRI	SAT	SUN
ETA (INSIDE)	41611A1936		_____	_____	_____	_____	_____	_____	_____
ETA (OUTSIDE)	41611A1971		_____	_____	_____	_____	_____	_____	_____

MOLD UNIT 802			VISIBLE EMISSIONS OBSERVED YES/NO						
DESCRIPTION	BRASS TAG	STACK #	MON	TUE	WED	THU	FRI	SAT	SUN
#1 COLLECTOR	41606A2732	3262	_____	_____	_____	_____	_____	_____	_____
#2 COLLECTOR	41606A2735	3263	_____	_____	_____	_____	_____	_____	_____
#3 COLLECTOR	41606A2738	3264	_____	_____	_____	_____	_____	_____	_____
#4 COLLECTOR	41606A2741	3265	_____	_____	_____	_____	_____	_____	_____
#5 COLLECTOR	41606A2744	3266	_____	_____	_____	_____	_____	_____	_____
#6 COLLECTOR	41606A2747	3267	_____	_____	_____	_____	_____	_____	_____
#7 COLLECTOR	41606A2750	3268	_____	_____	_____	_____	_____	_____	_____

MELT DEPT - 830			VISIBLE EMISSIONS OBSERVED YES/NO						
DESCRIPTION	BRASS TAG	STACK #	MON	TUE	WED	THU	FRI	SAT	SUN
ETA COLLECTOR	41611A2051		_____	_____	_____	_____	_____	_____	_____

CLEAN ROOM - 850			VISIBLE EMISSIONS OBSERVED YES/NO						
DESCRIPTION	BRASS TAG	STACK #	MON	TUE	WED	THU	FRI	SAT	SUN
#12 COLLECTOR	41606A2859	3650	_____	_____	_____	_____	_____	_____	_____
#11 COLLECTOR	41606A2862	3651	_____	_____	_____	_____	_____	_____	_____
#10 COLLECTOR	41606A2865	3652	_____	_____	_____	_____	_____	_____	_____
# 9 COLLECTOR	41606A2872	3661	_____	_____	_____	_____	_____	_____	_____
# 8 COLLECTOR	41606A2869	3660	_____	_____	_____	_____	_____	_____	_____
# 1 BACT	41607A1780	3640	_____	_____	_____	_____	_____	_____	_____
# 2 EXIJET	41635A1890	3641	_____	_____	_____	_____	_____	_____	_____
# 3 EXIJET	41635A1891	3642	_____	_____	_____	_____	_____	_____	_____

NOTE/REPORT DAILY ANY OTHER SOURCES OF VISIBLE EMISSIONS INCLUDING ROOF FANS